

SOLICITATION/CONTRACT/ORDER FOR COMMERCIAL ITEMS OFFEROR TO COMPLETE BLOCKS 12, 17, 23, 24, & 30				1. REQUISITION NO. 43430/0311-3219		PAGE 1 OF 23						
2. CONTRACT NO.		3. AWARD/EFFECTIVE DATE		4. ORDER NO.		5. SOLICITATION NO. N00164-00-R-0154		6. SOLICITATION ISSUE DATE 18 APR 01				
7. FOR SOLICITATION INFORMATION CALL		a. NAME JOHN PFENDER				b. TELEPHONE NO. (No collect calls) 812/854-5198		8. OFFER DUE DATE/LOCAL TIME 21 MAY 01 230 PM EST				
		9. ISSUED BY NSWC CRANE, CODE 1162NH BLDG. 2521 300 HIGHWAY 361 CRANE IN 47501				10. THIS ACQUISITION IS <input type="checkbox"/> UNRESTRICTED <input checked="" type="checkbox"/> SET ASIDE: 100 % FOR <input checked="" type="checkbox"/> SMALL BUSINESS <input type="checkbox"/> SMALL DISADV. BUSINESS <input type="checkbox"/> 8(A) SIC: SIZE STD:		11. DELIVERY FOR FOB DESTINATION UNLESS BLOCK IS MARKED <input type="checkbox"/> SEE SCHEDULE		12. DISCOUNT TERMS		
<input type="checkbox"/> 13a. THIS CONTRACT IS A RATED ORDER UNDER DPAS (15 CFR 700)												
13b. RATING DO-A60						14. METHOD OF SOLICITATION <input type="checkbox"/> RFO <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP						
15. DELIVER TO RECEIVING OFFICER; BLDG. 2074; NAVSEA CRANE; 300 HWY 361; CRANE IN 47522						CODE N00164		16. ADMINISTERED BY				
17a. CONTRACTOR/OFFEROR		CODE		FACILITY CODE		18a. PAYMENT WILL BE MADE BY						
TELEPHONE NO.		<input type="checkbox"/>		17b. CHECK IF REMITTANCE IS DIFFERENT AND PUT SUCH ADDRESS IN OFFER		18b. SUBMIT INVOICES TO ADDRESS SHOWN IN BLOCK 18a UNLESS BLOCK BELOW IS CHECKED <input type="checkbox"/> SEE ADDENDUM						
19. ITEM NO. SEE PAGE 2		20. SCHEDULE OF SUPPLIES/SERVICES			21. QUANTITY		22. UNIT		23. UNIT PRICE		24. AMOUNT	
25. ACCOUNTING AND APPROPRIATION DATA								26. TOTAL AWARD AMOUNT (For Govt. Use Only)				
<input type="checkbox"/> 27a. SOLICITATION INCORPORATES BY REFERENCE FAR 52.212-1, 52.212-4. FAR 52.212-3 AND 52.212-5 ARE ATTACHED. ADDENDA <input checked="" type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.												
<input type="checkbox"/> 27b. CONTRACT/PURCHASE ORDER INCORPORATES BY REFERENCE FAR 52.212-4. FAR 52.212-5 IS ATTACHED. ADDENDA <input type="checkbox"/> ARE <input type="checkbox"/> ARE NOT ATTACHED.												
28. CONTRACTOR IS REQUIRED TO SIGN THIS DOCUMENT AND RETURN <u>2</u> COPIES TO ISSUING OFFICE. CONTRACTOR AGREES TO FURNISH AND DELIVER ALL ITEMS SET FORTH OR OTHERWISE IDENTIFIED ABOVE AND ON ANY ADDITIONAL SHEETS SUBJECT TO THE TERMS AND CONDITIONS SPECIFIED HEREIN.						29. AWARD OF CONTRACT: REFERENCE _____ OFFER DATED _____. YOUR OFFER ON SOLICITATION (BLOCK 5), INCLUDING ANY ADDITIONS OR CHANGES WHICH ARE SET FORTH HEREIN, IS ACCEPTED AS TO ITEMS:						
30a. SIGNATURE OF OFFEROR/CONTRACTOR						31a. UNITED STATES OF AMERICA (SIGNATURE OF CONTRACTING OFFICER)						
30b. NAME AND TITLE OF SIGNER (TYPE OR PRINT)				30c. DATE SIGNED		31b. NAME OF CONTRACTING OFFICER (TYPE OR PRINT)				31c. DATE SIGNED		
32a. QUANTITY IN COLUMN 21 HAS BEEN <input type="checkbox"/> RECEIVED <input type="checkbox"/> INSPECTED <input type="checkbox"/> ACCEPTED, AND CONFORMS TO THE CONTRACT, EXCEPT AS NOTED						33. SHIP NUMBER		34. VOUCHER NUMBER		35. AMOUNT VERIFIED CORRECT FOR		
32b. SIGNATURE OF AUTHORIZED GOVT REPRESENTATIVE						36. PAYMENT <input type="checkbox"/> COMPLETE <input type="checkbox"/> PARTIAL <input type="checkbox"/>		37. CHECK NUMBER		38. S/R ACCOUNT NO.		
						39. S/R VOUCHER NO.		40. PAID BY				
41a. I CERTIFY THIS ACCOUNT IS CORRECT AND PROPER FOR PAYMENT						42a. RECEIVED BY (Print)		42b. RECEIVED AT (Location)		42c. DATE REC'D (YY/MM/DD)		
41b. SIGNATURE AND TITLE OF CERTIFYING OFFICER				41c. DATE		42d. TOTAL CONTAINERS						

SECTION "B" - SUPPLIES and PRICES/COST

ITEM NO.	SUPPLIES/ SERVICES	QUANTITY	Unit	UNIT PRICE	AMOUNT
	<p>Pricing is hereby requested on a five year Indefinite Delivery/Indefinite Quantity (IDIQ) of 40mm non-lethal rubber ball (RB) and 40mm non-lethal foam rubber baton (FRB) ammunition. The maximum quantity that may be purchased throughout the life of the contract is 800,000/ea. The contract will also involve the delivery of data required under CLIN 0005. The data for CLIN 0005 shall be <u>Not Separately Priced</u>. The minimum quantity is 50,000/ea of each round of ammunition. The minimum quantities will be obligated at time of contract award. There will be <u>no</u> order guaranteed above the stated minimum quantity.</p> <p>You are hereby requested to provide pricing for a 5 year period (see unit price table) for each round. Each year consists of 365 calendar days starting the day of contract award. Different prices are acceptable for each year.</p>				
0001	40mm non-lethal Rubber Ball Cartridge in accordance with (IAW) the germane sections of OEMC SPEC 0016 entitled "Specification Cartridge, MM, Rubber Ball, & Cartridge, 40MM Foam Rubber Baton, Non-lethal"	50,000 Minimum	EA		
0002	40mm non-lethal Rubber Ball Cartridge in accordance with (IAW) the germane sections of OEMC SPEC 0016 entitled "Specification Cartridge, MM, Rubber Ball, & Cartridge, 40MM Foam Rubber Baton, Non-lethal"	750,000	EA	<i>See Unit Price Table</i>	<i>N/A</i>
0003	40mm non-lethal Rubber Ball Cartridge in accordance with (IAW) the germane sections of OEMC SPEC 0016 entitled "Specification Cartridge, MM, Rubber Ball, & Cartridge, 40MM Foam Rubber Baton, Non-lethal"	50,000 Minimum	EA		
0004	40mm non-lethal Rubber Ball Cartridge in accordance with (IAW) the germane sections of OEMC SPEC 0016 entitled "Specification Cartridge, MM, Rubber Ball, & Cartridge, 40MM Foam Rubber Baton, Non-lethal"	750,000	EA	<i>See Unit Price Table</i>	<i>N/A</i>
0005	DATA IAW Contract Data Requirements List (CDRL) A001 - A009.	1	LO	NSP	NSP

Continuation of any SF 1449 block in accordance with FAR subparagraph 12.303(b)**SCHEDULE NOTES:**

SPECIAL NOTICE - The Director, Defense Procurement has revised DFARS to require contractors to be registered in the Central Contractor Registration (CCR) as a condition for receipt of contract award effective 1 June 1998. Offerors may obtain information on registration and annual confirmation requirements by calling 1-888-227-2423, or via the Internet at <http://ccr.edi.disa.mil>. For further details regarding the requirements of CCR, offerors are advised to review the requirements of DFAR 252.204-7004 contained herein.

EXPEDITING CONTRACT CLOSEOUT (NAVSEA) (DEC 1995)

(a) As part of the negotiated fixed price or total estimated amount of this contract, both the Government and the Contractor have agreed to waive any entitlement that otherwise might accrue to either party in any residual dollar amount of \$500 or less at the time of final contract closeout. The term "residual dollar amount" shall include all money that would otherwise be owed to either part at the end of the contract except that, amounts connected in any

way with taxation, allegations of fraud and/or antitrust violations shall be excluded. For purposes of determining residual dollar amounts, offsets of money owed by one party against money that would otherwise be paid by that party may be considered to the extent permitted by law.

(b) This agreement to waive entitlement to residual dollar amounts has been considered by both parties. It is agreed that the administrative costs for either part associated with collected such small dollar amounts could exceed the amount to be recovered.

List your Commercial and Government (CAGE) Code and Contractor Establishment Code in Block 17a. of Page 1.

The agency authorized to place delivery orders against this contract is: Crane Division, Naval Surface Warfare Center (NAVSURFWARCENDIV Crane), Crane, IN 47522.

Delivery orders will be placed against this contract by the Government using a DD 1155 format. Delivery orders placed under this contract will be placed by the Government no later than 4 years and 8 months after the date of contract award. Delivery Orders placed under this contract shall be placed to ensure that no deliveries are required later than 5 years after contract award.

FAR 52.212-3, Offeror Representations and Certifications Commercial Items, of the solicitation will be incorporated by reference and made a material part of any resultant contract IAW FAR 15.406-1(b).

BLOCK 25: ACCOUNTING AND APPROPRIATION DATA IS AS FOLLOWS:

To be completed at contract award and included on the resultant delivery orders

It is requested that technical questions concerning this procurement be submitted, via electronic mail not later than 2:00 PM EST on the seventh calendar day prior to the date shown in item 8 on page 1 submitted to the following e-mail address: pfender_j@crane.navy.mil.

For CLINs 0002 & 0004, pricing is required on quantities of 2,112/ea, 20,000/ea, and 60,000/ea. In order to permit the government to benefit from the economies of scale, offerors shall permit the government to interpolate any quantity between 2,112/ea - 60,000/ea utilizing the aforementioned prices.

The contractor shall comply the requirements of CQR-0001 (December 1998) entitled "Contractor Quality Requirements"

UNIT PRICE TABLE FOR CLINs 0002 (RUBBER BALL) & 0004 (FOAM RUBBER BATON)						
CLIN	QNTY	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
0002	2,112	\$ /ea	\$ /ea	\$ /ea	\$ /ea	\$ /ea
	20,000	\$ /ea	\$ /ea	\$ /ea	\$ /ea	\$ /ea
	60,000	\$ /ea	\$ /ea	\$ /ea	\$ /ea	\$ /ea
0004	2,112	\$ /ea	\$ /ea	\$ /ea	\$ /ea	\$ /ea
	20,000	\$ /ea	\$ /ea	\$ /ea	\$ /ea	\$ /ea
	60,000	\$ /ea	\$ /ea	\$ /ea	\$ /ea	\$ /ea

The quantities listed in the unit price table are to be priced on a **per delivery order** basis. All quantities and years must be priced. The Government reserves the right to issue delivery orders at quantities not specifically listed

above but within the ranges listed in the table. The unit price per option exercise, if any, when the quantity is not specifically listed above will be determined via mathematical interpolation of the unit price.

Contract Clauses in accordance with FAR subparagraph 12.303(c)

Contract Terms & Conditions--Commercial Items (May 1999)

52.212-04

ADDENDUM to 52.212-4

NOTE: The clause at FAR 52.212-4 has been tailored for this procurement as follows:

Paragraph (a) *Inspection/Acceptance* is modified as follows:

INSPECTION AND ACCEPTANCE (ORIGIN) (CLINs 0001 - 0004)

(a) Government inspection and acceptance of the supplies or services to be furnished hereunder shall be performed by cognizant DCMC personnel and/or NSWC Crane personnel at the contractor's or subcontractor's plant located at _____. The location designated for such inspection and acceptance shall not be changed without prior written authorization of the Contracting Officer.

(b) The cognizant inspector shall be notified when supplies or services are ready for government inspection.

(c) Advance notification of the cognizant inspector X is ___ is not required at least 7 days prior to conducting contractor inspections and/or testing.

INSPECTION AND ACCEPTANCE LANGUAGE FOR DATA (CLIN 0005)

Inspection and acceptance of all data shall be as specified on the attached Contract Data Requirements List(s), DD Form 1423.

Paragraph (o) *Warranty* add the following:

The Government is seeking the contractor's standard commercial warranty.

The following paragraph (t) is hereby added to the clause:

(t) *Contractor Performance Reports.* The Government will evaluate the performance of the contractor awarded the contract resulting from this solicitation, in accordance with FAR 42.1500. The following performance rating factors will be utilized:

- Quality
- Cost Control
- Timeliness of Performance
- Business Relations
- Customer Satisfaction

Block 11. Delivery for FOB Destination is required as follows:

CLIN	QTY	REQUIRED DELIVERY
0001	50,000/ea	120 Days after the effective date of the delivery order (DAO)
0002	750,000/ea	Delivery to commence 120 DAO or 30 days after last scheduled delivery whichever is later.
0003	50,000/ea	120 Days after the effective date of the delivery order (DAO)
0004	750,000/ea	Delivery to commence 120 DAO or 30 days after last scheduled delivery whichever is later.
0005	1/LO	IAW DD1423 Contract Data Requirements Lists (CDRLs)

PLACE OF DELIVERY

The material to be furnished hereunder shall be delivered F.o.b. Destination with all transportation charges paid by the supplier to:

RECEIVING OFFICER
BLDG 2074
NAVSURFWARCENDIV
CRANE, IN 47522-5001
Mark For: B. 2524/Code 4033
Attn: Mr. Dennis J. Jones

The contractor shall schedule deliveries under this contract to ensure arrival at destination only on Monday through Thursday (excluding holidays) between the hours of 7:00 A.M. and 2:00 P.M. Eastern Standard Time. The receiving facility is normally closed Friday, Saturday, and Sunday.

**SAFEGUARDING SENSITIVE CONVENTIONAL ARMS, AMMUNITION, AND EXPLOSIVES
(DFARS 252.223-7007)(FEB 1996)**

(a) Definitions.

"Arms, ammunition, and explosives (AA&E)," as used in this clause, means those items within the scope (chapter 1, paragraph B) of DOD 5100.76-M, Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives.

(b) The requirements of DOD 5100.76-M apply to the following items of AA&E being developed, produced, manufactured, or purchased for the Government, or provided to the Contractor as Government-furnished property under this contract:

NOMENCLATURE	NATIONAL STOCK NUMBER	SENSITIVITY/CATEGORY
40mm non-lethal Rubber Ball Cartridge		Ammunition Category IV
40mm non-lethal Foam Rubber Baton Cartridge		Ammunition Category IV

(c) The Contractor shall comply with the requirements of DOD 5100.76-M, as specified in the statement of work. The edition of DOD 5100.76-M in effect on the date of issuance of the solicitation for this contract shall apply.

(d) The Contractor shall allow representatives of the Defense Investigative Service (DIS), and representatives of other appropriate offices of the Government, access at all reasonable times into its facilities and those of its subcontractors, for the purpose of performing surveys, inspections, and investigations necessary to review compliance with the physical security standards applicable to this contract.

(e) The Contractor shall notify the cognizant DIS field office of any subcontract involving AA&E within 10 days after award of the subcontract.

(f) The Contractor shall ensure that the requirements of this clause are included in all subcontracts, at every tier-

(1) For the development, production, manufacture, or purchase of AA&E; or

(2) When AA&E will be provided to the subcontractor as Government-furnished property.

(g) Nothing in this clause shall relieve the Contractor of its responsibility for complying with applicable Federal, state, and local laws, ordinances, codes, and regulations (including requirements for obtaining licenses and permits) in connection with the performance of this contract.

SAFEGUARDING ARMS, AMMUNITION AND EXPLOSIVES

NOTE: Supplies procured under this contract are identified as sensitive material, Category IV and shall be transported in accordance with the requirements of DOD 5100.76-M, "Physical Security of Sensitive Conventional Arms, Ammunition, and Explosives".

PHYSICAL SECURITY OF CONTRACTOR'S FACILITIES

The contractor agrees to maintain his facilities in accordance with the applicable requirements of Department of Defense Instruction 4145.26M as referenced in DFAR 252.223-7002. Supplies procured under this contract are identified as sensitive material (Category IV) under DOD 5100.76-M (Physical Security of Sensitive Conventional Arms, Ammunition and Explosives at contractor facilities), requiring physical security and transportation in accordance with DOD 5100.76-M.

<u>Title and Date</u>	<u>FAR Paragraph No.</u>
Gratuities (Apr 1984)	52.203-03
Defense Priority and Allocation Requirements (Sep 1990)	52.211-15
Notice of Total Small Business Set-Aside (Jul 1996)	52.219-06
Preaward On-Site Equal Opportunity Compliance Review (Feb 1999)	52.222-24
Hazardous Material Identification and Material Safety Data (Jan 1997)	52.223-03
Restrictions on Certain Foreign Purchases (Feb 2000)	52.225-13
Stop Work Order (Aug 1989)	52.242-15
Changes -- Fixed Price (Aug. 1987)	52.243-01
F.o.b. Destination (Nov 1991)	52.247-34
	<u>DFAR Paragraph No.</u>
Required Central Contractor Registration (Mar 2000)	252.204-7004

NOTICE OF PRIORITY RATING FOR NATIONAL DEFENSE USE (FAR 52.211-14) (SEP 1990)

Any contract awarded as a result of this solicitation will be (___) DX rated order; (X) DO rated order certified for national defense use under the Defense Priorities and Allocations System (DPAS) (15 CFR 700), and the Contractor will be required to follow all of the requirements of this regulation.

ORDERING (OCT 1995) (FAR 52.216-18)

- (a) Any supplies and services to be furnished under this contract shall be ordered by issuance of delivery orders or task orders by the individuals or activities designated in the Schedule. Such orders may be issued from effective date of the contract through 4 years and 9 months from the effective date of contract.
- (b) All delivery orders or task orders are subject to the terms and conditions of this contract. In the event of conflict between a delivery order or task order and this contract, the contract shall control.
- (c) If mailed, a delivery order or task order is considered "issued" when the Government deposits the order in the mail. Orders may be issued orally, by facsimile, or by electronic commerce methods only if authorized in the Schedule.

ORDER LIMITATIONS (OCT 1995) (FAR 52.216-19)

- (a) Minimum Order. When the Government requires supplies or services covered by this contract in an amount of less than 2,112/ea for either round, the Government is not obligated to purchase, nor is the Contractor obligated to furnish, those supplies or services under the contract.
- (b) Maximum Order. The Contractor is not obligated to honor--
- (1) Any order for a single item in excess of 60,000/ea for either round.
 - (2) Any order for a combination of items in excess of 120,000/ea; or
 - (3) A series of orders from the same ordering office within 30 days that together call for quantities exceeding the limitation in subparagraph (1) or (2) of this section.

(c) If this is a requirement contract (i.e., includes the Requirements clause at subsection 52.216-21 of the Federal Acquisition Regulation (FAR), the Government is not required to order a part of any one requirement from the Contractor if that requirement exceeds the maximum-order limitations in paragraph (b) above.

(d) Notwithstanding paragraphs (b) and (c) above, the Contractor shall honor any order exceeding the maximum order limitations in paragraph (b), unless that order (or orders) is returned to the ordering office within 14 days after issuance, with written notice stating the Contractor's intent not to ship the item (or items) called for the reasons. Upon receiving this notice, the Government may acquire the supplies or service from another source.

INDEFINITE QUANTITY (OCT 1995) (FAR 52.216-22)

(a) This is an indefinite-quantity contract for the supplies or services specified, and effective for the period stated, in the Schedule. The quantities of supplies and services specified in the Schedule are estimates only and are not purchased by this contract.

(b) Delivery or performance shall be made only as authorized by orders issued in accordance with the Ordering clause. The Contractor shall furnish to the Government, when and if ordered, the supplies or services specified in the Schedule up to and including the quantity designated in the Schedule as the "maximum". The Government shall order at least the quantity of supplies or services designated in the Schedule as the "minimum."

(c) Except for any limitations on quantities in the Order Limitations clause or in the Schedule, there is no limit on the number of orders that may be issued. The Government may issue orders requiring delivery to multiple destinations or performance at multiple locations.

(d) Any order issued during the effective period of this contract and not completed within that period shall be completed by the Contractor within the time specified in the order. The contract shall govern the Contractor's and Government's rights and obligations with respect to that order to the same extent as if the order were completed during the contract's effective period; provided, that the Contractor shall not be required to make any deliveries under this contract after 5 years from the effective date of the contract.

OZONE-DEPLETING SUBSTANCES (JUN 1996) (FAR 52.223-11)

(a) *Definitions.* Ozone-depleting substance", as used in this clause, means any substance designated as Class I by the Environmental Protection Agency (EPA) (40 CFR Part 82), including but not limited to chlorofluorocarbons, halons, carbon tetrachloride, and methyl chloroform; or any substance designated as Class II by EPA (40 CFR Part 82), including but not limited to hydrochlorofluorocarbons.

(b) The Contractor shall label products which contain or are manufactured with ozone-depleting substances in the manner and to the extent required by 42 U.S.C. 7671j (b), (c) and (d) and 40 CFR Part 82, Subpart E as follows: "WARNING: Contains (or manufactured with, if applicable) _____*, a substance(s) which harm(s) public health and environment by destroying ozone in the upper atmosphere."

**The Contractor shall insert the name of the substance(s).*

STANDARD COMMERCIAL WARRANTY

The contractor shall extend to the Government the full coverage of any standard commercial warranty normally offered in a similar commercial sale, provided such warranty is available at no additional cost to the Government. Acceptance of the standard commercial warranty does not waive the Government's rights under the "Inspection" clause nor does it limit the Government's rights with regard to the other terms and conditions of this contract. In the event of a conflict, the terms and conditions of the contract shall take precedence over the standard commercial warranty. The standard commercial warranty period shall begin upon final acceptance of the applicable material and/or services listed in the Schedule.

The contractor shall provide a copy of its standard commercial warranty (if applicable) with its offer. The warranty covers a period of ___ months. (Offeror is to insert number.)

**Contract Terms and Conditions Required to Implement Statutes or Executive Orders -- Commercial Items
(Feb 2001) (FAR 52.212-5)**

(a) The Contractor shall comply with the following FAR clauses, which are incorporated in this contract by reference, to implement provisions of law or executive orders applicable to acquisitions of commercial items:

- (1) 52.222-3 , Convict Labor (E.O.11755).
- (2) 52.233-3 , Protest after Award (31 U.S.C.3553).

(b) The Contractor shall comply with the FAR clauses in this paragraph (b) that the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or Executive orders applicable to acquisitions of commercial items or components:

[Contracting Officer must check as appropriate.]

___ (1) 52.203-6 , Restrictions on Subcontractor Sales to the Government, with Alternate I (41 U.S.C.253g and 10 U.S.C.2402).

___ (2) 52.219-3 , Notice of HUBZone Small Business Set-Aside (Jan 1999).

___ (3) 52.219-4 , Notice of Price Evaluation Preference for HUBZone Small Business Concerns (Jan 1999) (if the offeror elects to waive the preference, it shall so indicate in its offer).

___ (4)

___ (i)

___ (ii)

___ (iii) 52.219-5 , Very Small Business Set-Aside (Pub.L.103-403, section 304, Small Business Reauthorization and Amendments Act of 1994).

Alternate I to 52.219-5 .

Alternate II to 52.219-5 .

✓___ (5) 52.219-8 , Utilization of Small Business Concerns (15 U.S.C.637 (d)(2) and (3)).

___ (6) 52.219-9 , Small Business Subcontracting Plan (15 U.S.C.637(d)(4)).

✓___ (7) 52.219-14 , Limitations on Subcontracting (15 U.S.C.637(a)(14)).

___ (8)

(i) 52.219-23 , Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns (Pub.L.103-355, section 7102, and 10 U.S.C.2323) (if the offeror elects to waive the adjustment, it shall so indicate in its offer).

(ii) ___ Alternate I of 52.219-23 .

___ (9) 52.219-25 , Small Disadvantaged Business Participation Program -- Disadvantaged Status and Reporting (Pub.L.103-355, section 7102, and 10 U.S.C.2323).

____ (10) 52.219-26 , Small Disadvantaged Business Participation Program -- Incentive Subcontracting (Pub.L.103-355, section 7102, and 10 U.S.C.2323).

✓ (11) 52.222-21 , Prohibition of Segregated Facilities (Feb 1999).

✓ (12) 52.222-26 , Equal Opportunity (E.O.11246).

✓ (13) 52.222-35 , Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C.4212).

✓ (14) 52.222-36 , Affirmative Action for Workers with Disabilities (29 U.S.C.793).

✓ (15) 52.222-37 , Employment Reports on Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C.4212).

✓ (16) 52.222-19 , Child Labor -- Cooperation with Authorities and Remedies (E.O.13126).

____ (17) ____ (i) 52.223-9 , Estimate of Percentage of Recovered Material Content for EPA-Designated Products (42 U.S.C.6962(c)(3)(A)(ii)).

____ (ii) Alternate I of 52.223-9 (42 U.S.C.6962(i)(2)(C)).

____ (18) 52.225-1 , Buy American Act – Balance of Payments Program – Supplies (41 U.S.C.10a-10d).

____ (19) ____ (i) 52.225-3 , Buy American Act -- North American Free Trade Agreement -- Israeli Trade Act -- Balance of Payments Program (41 U.S.C.10a-10d, 19 U.S.C.3301 note, 19 U.S.C.2112 note).

____ (ii) Alternate I of 52.225-3 .

____ (iii) Alternate II of 52.225-3 .

____ (20) 52.225-5 , Trade Agreements (19 U.S.C.2501, et seq., 19 U.S.C.3301 note).

✓ (21) 52.225-13 , Restriction on Certain Foreign Purchases (E.O.12722, 12724, 13059, 13067, 13121, and 13129).

____ (22) 52.225-15 , Sanctioned European Union Country End Products (E.O. 12849).

____ (23) 52.225-16 , Sanctioned European Union Country Services (E.O.12849).

✓ (24) 52.232-33 , Payment by Electronic Funds Transfer -- Central Contractor Registration (31 U.S.C.3332).

____ (25) 52.232-34 , Payment by Electronic Funds Transfer -- Other than Central Contractor Registration (31 U.S.C.3332).

____ (26) 52.232-36 , Payment by Third Party (31 U.S.C.3332).

____ (27) 52.239-1 , Privacy or Security Safeguards (5 U.S.C.552a).

____ (28) ✓ (i) 52.247-64 , Preference for Privately Owned U.S.-Flag Commercial Vessels (46 U.S.C.1241).

____ (ii) Alternate I of 52.247-64 .

(c) The Contractor shall comply with the FAR clauses in this paragraph (c), applicable to commercial services, which the Contracting Officer has indicated as being incorporated in this contract by reference to implement provisions of law or executive orders applicable to acquisitions of commercial items or components:

[Contracting Officer check as appropriate.]

___ (1) 52.222-41, Service Contract Act of 1965, As Amended (41 U.S.C.351, et seq.).

___ (2) 52.222-42, Statement of Equivalent Rates for Federal Hires (29 U.S.C.206 and 41 U.S.C.351, et seq.).

___ (3) 52.222-43, Fair Labor Standards Act and Service Contract Act -- Price Adjustment (Multiple Year and Option Contracts) (29 U.S.C.206 and 41 U.S.C.351, et seq.).

___ (4) 52.222-44, Fair Labor Standards Act and Service Contract Act -- Price Adjustment (29 U.S.C.206 and 41 U.S.C.351, et seq.).

___ (5) 52.222-47, SCA Minimum Wages and Fringe Benefits Applicable to Successor Contract Pursuant to Predecessor Contractor Collective Bargaining Agreement (CBA) (41 U.S.C.351, et seq.).

___ (6) 52.222-50, Non-displacement of Qualified Workers (Executive Order 12933).

(d) *Comptroller General Examination of Record.* The Contractor shall comply with the provisions of this paragraph (d) if this contract was awarded using other than sealed bid, is in excess of the simplified acquisition threshold, and does not contain the clause at 52.215-2, Audit and Records -- Negotiation.

(1) The Comptroller General of the United States, or an authorized representative of the Comptroller General, shall have access to and right to examine any of the Contractor's directly pertinent records involving transactions related to this contract.

(2) The Contractor shall make available at its offices at all reasonable times the records, materials, and other evidence for examination, audit, or reproduction, until 3 years after final payment under this contract or for any shorter period specified in FAR Subpart 4.7, Contractor Records Retention, of the other clauses of this contract. If this contract is completely or partially terminated, the records relating to the work terminated shall be made available for 3 years after any resulting final termination settlement. Records relating to appeals under the disputes clause or to litigation or the settlement of claims arising under or relating to this contract shall be made available until such appeals, litigation, or claims are finally resolved.

(3) As used in this clause, records include books, documents, accounting procedures and practices, and other data, regardless of type and regardless of form. This does not require the Contractor to create or maintain any record that the Contractor does not maintain in the ordinary course of business or pursuant to a provision of law.

(e) Notwithstanding the requirements of the clauses in paragraphs (a), (b), (c) or (d) of this clause, the Contractor is not required to include any FAR clause, other than those listed below (and as may be required by an addenda to this paragraph to establish the reasonableness of prices under Part 15), in a subcontract for commercial items or commercial components --

- (1) 52.222-26 , Equal Opportunity (E.O.11246);
- (2) 52.222-35 , Affirmative Action for Disabled Veterans and Veterans of the Vietnam Era (38 U.S.C.4212);
- (3) 52.222-36 , Affirmative Action for Workers with Disabilities (29 U.S.C.793);
- (4) 52.247-64 , Preference for Privately-Owned U.S.- Flag Commercial Vessels (46 U.S.C.1241) (flow down not required for subcontracts awarded beginning May 1, 1996); and
- (5) 52.222-41 , Service Contract Act of 1965, As Amended (41 U.S.C.351, et seq.).

(End of Clause)

Contract Terms and Conditions Required to Implement Statutes or Executive Orders Applicable to Defense Acquisitions of Commercial Items (Dec 2000) (DFARS 252.212-7001)

(a) The Contractor agrees to comply with any clause that is checked on the following list of DFARS clauses which, if checked, is included in this contract by reference to implement provisions of law or Executive Orders applicable to acquisitions of commercial items or components.

<input checked="" type="checkbox"/>	252.205-7000	Provision of Information to Cooperative Agreement Holders (U.S.C.2416).
<input type="checkbox"/>	252.206-7000	Domestic Source Restriction (10 U.S.C.2304).
<input type="checkbox"/>	252.219-7003	Small Disadvantaged, and Women-Owned Small Business Subcontracting Plan (DoD Contracts) (15 U.S.C.637).
<input type="checkbox"/>	252.219-7005	Incentive for Subcontracting with Small Businesses, Small Disadvantaged Businesses, Historically Black Colleges and Universities and Minority Institutions (____Alternate I) (Section 9004, Pub.L.101-165 (10 U.S.C.2301 (repealed) note)).
<input checked="" type="checkbox"/>	252.225-7001	Buy American Act and Balance of Payments Program (41 U.S.C.10a-10d, E.O. 10582).
<input type="checkbox"/>	252.225-7007	Buy American Act -- Trade Agreements -- Balance of Payments Program (41 U.S.C.10a-10d, 19 U.S.C.2501-2518, and 19 U.S.C.3301 note).
<input checked="" type="checkbox"/>	252.225-7012	Preference for Certain Domestic Commodities.
<input type="checkbox"/>	252.225-7014	Preference for Domestic Specialty Metals (10 U.S.C.2241 note).
<input type="checkbox"/>	252.225-7015	Preference for Domestic Hand or Measuring Tools (10 U.S.C.2241 note).
<input type="checkbox"/>	252.225-7016	Restriction on Acquisition of Ball and Roller Bearings (____Alternate I) (Section 8064 of Pub.L.106-259).
<input type="checkbox"/>	252.225-7021	Trade Agreements (19 U.S.C.2501-2518 and 19 U.S.C.3301 note).
<input type="checkbox"/>	252.225-7027	Restriction on Contingent Fees for Foreign Military Sales (22 U.S.C.2779).
<input type="checkbox"/>	252.225-7028	Exclusionary Policies and Practices of Foreign Governments (22 U.S.C.2755).
<input type="checkbox"/>	252.225-7029	Preference for United States or Canadian Air Circuit Breakers (10 U.S.C.2534(a)(3)).
<input type="checkbox"/>	252.225-7036	Buy American Act -- North American Free Trade

		Agreement Implementation Act – Balance of Payments Program (___ Alternate I) (41 U.S.C.10a-10d and 19 U.S.C.3301 note).
✓	252.227-7015	Technical Data -- Commercial Items (10 U.S.C.2320).
✓	252.227-7037	Validation of Restrictive Markings on Technical Data (10 U.S.C.2321).
✓	252.243-7002	Requests for Equitable Adjustment (10 U.S.C.2410).
✓	252.247-7023	Transportation of Supplies by Sea (___ Alternate I) (___ Alternate II) (10 U.S.C.2631).
✓	252.247-7024	Notification of Transportation of Supplies by Sea (10 U.S.C.2631).

(b) In addition to the clauses listed in paragraph (e) of the Contract Terms and Conditions Required to Implement Statutes or Executive Orders -- Commercial Items clause of this contract (Federal Acquisition Regulation 52.212-5), the Contractor shall include the terms of the following clauses, if applicable, in subcontracts for commercial items or commercial components, awarded at any tier under this contract:

252.225-7014	Preference for Domestic Specialty Metals, Alternate I (10 U.S.C.2241 note).
252.247-7023	Transportation of Supplies by Sea (10 U.S.C.2631).
252.247-7024	Notification of Transportation of Supplies by Sea (10 U.S.C.2631).

EXHIBITS/ATTACHMENTS SECTION IN ACCORDANCE WITH FAR 12.303(D)

CONTRACT DATA REQUIREMENTS LIST (CDRLs)			
CDRL #	CDRL TITLE	DATE	# OF PAGES
A001	Configuration Management Plan	12 FEB 01	1
A002	Engineering Change Proposal	12 FEB 01	1
A003	Request for Deviation	12 FEB 01	1
A004	Request for Wavier	12 FEB 01	1
A005	Technical Data for Munitions	12 FEB 01	2
A006	Ammunition Data Card - Rubber Ball	12 FEB 01	1
A007	Ammunition Data Card - FRB	12 FEB 01	1
A008	Test Plan	12 FEB 01	1
A009	Special Inspection Equipment Calibration Procedures	12 FEB 01	1
A010	Certification/Data Report	12 FEB 01	1
DATA ITEM DESCRIPTION (DID)			
DID #	DID TITLE		
DI-CMAN-80858A	Contractor's Configuration Management Plan	17APR 92	1
DI-CMAN-80639B	Engineering Change Proposal (ECP)	13JAN95	1
DI-CMAN-80640B	Request for Deviation (RFD)	13JAN95	1
DI-CMAN-80641B	Request for Waiver (RFW)	13JAN95	1
DI-SAFT-80182B	Technical Data for Munitions (TDM)	30 OCT87	3
DI-MISC-80043A	Ammunition Data Card (ADC)	22MAY98	12
DI-NDTI-80566	Test Plan	13APR88	3
DI-QCIC-81007	Special Inspection Equipment Calibration Procedures	11SEP89	4
DI-MISC-80678	Certification/Data Report	12SEP88	2
SPECIFICATION			
OEMC SPEC 00016	SPECIFICATION; CARTRIDGE, 40MM, RUBBER BALL, &; CARTRIDGE, 40MM FOAM RUBBER BATON; NON-LETHAL	05FEB01	37
CQR-001	Contract Quality Requirements	DEC98	3

Note: Attached CDRLs are unsigned; however, they do represent the government's data requirements. Signed CDRLs will be included in any resultant contract(s). The CDRLs and Specification are attached in Word format to this document. The DIDs and the CQR document will be provided in a separate PDF file. The solicitation and PDF files can be obtained at the NAVSEA Crane Internet site.

Title and DateFAR Paragraph No.

Instructions to Offerors -- Commercial Items (Oct 2000)

52.212-01

NOTE: The provision at 52.212-1 has been tailored (See addendum 2).

Addendum 2**52.212-1 Tailoring**

Paragraph (c) Period of acceptance of offers, is changed to read as follows: The offeror agrees to hold the prices in its offer firm for 180 days from the date specified for receipt of offers, unless another time period is specified in an addendum to the solicitation.

Paragraph (h) Multiple Awards is eliminated from the clause as the government intends to have a single award as a result of this solicitation.

The contractors shall supply with their proposals the information required under the provision entitled: "Contractor Past Performance Data".

The contractors shall supply with their proposals pricing on a firm-fixed price basis for 480/ea rounds of each 40MM non-lethal configuration to be delivered under a separate purchase order to be delivered 21 days after placement of any subsequent purchase order (see table below for pricing input). The pricing received will be utilized as part of the price evaluation which will be utilized in both the initial competitive range determination and final award decision.

SUPPLIES/ SERVICES	QUANTITY	Unit	UNIT PRICE	AMOUNT
40MM Rubber Ball	480	EA	\$	\$
40MM FRB	480	EA	\$	\$

Product samples of sixty (60)/ea of each 40MM non-lethal configuration are required with the proposals and are to shipped and marked in accordance with the *PLACE OF DELIVERY* clause found on page 5 of this solicitation.

ALTERNATE PROPOSALS

Offers may submit more than one proposal, each of which must satisfy the mandatory requirements of the solicitation, including any Benchmark Tests, in order to be considered. As a minimum, one of the proposals submitted must be complete. The alternate proposal(s) may be in an abbreviated form following the same section format, but providing only those sections which differ in any way from those contained in the original proposal. Each proposal will include cost tables indicating the complete range of pricing options. In the case of price/cost options for a given configuration, an alternate proposal will not be required. If alternate proposals are submitted, such alternatives will be clearly labeled and identified on the cover page of each separate document. The reason for each alternate and its comparative benefits shall be explained. Each proposal submitted will be evaluated on its own merits.

EVALUATION--COMMERCIAL ITEMS (JAN 1999) (FAR 52.212-2)

(a) The Government will award a contract resulting from this solicitation to the responsible offeror whose offer conforming to the solicitation will be most advantageous to the Government, price and other factors considered. The following delineates the selection process:

All interest parties shall provide product samples as follows: sixty (60)/ea rounds of non-lethal 40MM Rubber Ball Cartridges and sixty (60)/ea rounds of non-lethal 40MM Foam Rubber Baton Cartridges. The product samples shall be submitted by each potential contractor, free of cost to the government as part of their proposal. The Government shall make an initial competitive range determination based on pricing submitted in response to this solicitation (see price evaluation below). This initial competitive range determination will be made prior to any testing of product samples submitted under this solicitation and prior to evaluation of the offerors' past performance. This initial competitive range determination will include only the most highly rated proposals. This range will only include a number of offerors required for efficient competition. All firms that are not included in the competitive range will be notified, in writing, and shall have their product samples returned. All firms within the competitive range will have their cartridges evaluated for performance and workmanship, by the government, in accordance with sections 3.4 and 3.5 of OEMC SPEC 00016. The government reserves the right to no longer consider for award any firm whose product samples, submitted under this solicitation, do not meet all the requirements of sections 3.4 and 3.5 of OEMC SPEC 00016. All vendors whose product samples of both rounds meet the requirements of sections 3.4 and 3.5 of OEMC SPEC 00016 of the specification will remain under consideration for award. A subsequent competitive range determination will be made by the Government to include only the number of offerors required for efficient competition. The Government will notify, in writing, all firms that are not included in the competitive range after this subsequent competitive range determination. The Government will then place purchase orders¹ for 480/ea rounds of each round from each contractor remaining within the competitive range. The government will repack those cartridges in military packaging, as required, and subject those cartridges to the Government Performed Qualification Test Program of Section 3.1.5 of Specification OEMC SPEC 00016. The government reserves the right to no longer consider for award any firm whose product

samples, submitted under this solicitation, do not meet all the requirements of section 3.1.5 of OEMC SPEC 00016. The award decision will then be based on the evaluation criteria delineated below.

¹ Contingent upon passing of a required Pre-award survey.
The evaluation criteria shall be:

I. Company Past Performance

- A. Quality
- B. Timeliness

II. Price

The Company Past Performance factor is more important than Price.

The government will utilize the following ratings for the Company Past Performance factor: Highly Favorable, Favorable, Neither Favorable nor Unfavorable, Unfavorable, Highly Unfavorable. Although price is second of the two evaluation factors, it will not be ignored. The degree of importance of the price will increase with the degree of equality of the proposals in relation to the other factor on which selection is to be based, or when the price is so significantly high as to diminish the value of the superiority in past performance to the government. If the price received from any offeror is so substantially higher than others received in response to the solicitation, to the extent that the higher pricing negates any potential past performance superiority, the government reserves the right to no longer consider that offeror for award and shall not be required to evaluate the offeror's past performance. Price evaluation alone will be utilized to make the initial competitive range determination.

(b) A written notice of award or acceptance of an offer, mailed or otherwise furnished to the successful offeror within the time for acceptance specified in the offer, shall result in a binding contract without further action by either party. Before the offer's specified expiration time, the Government may accept an offer (or part of an offer), whether or not there are negotiations after its receipt, unless a written notice of withdrawal is received before award.

NOTE: The provision at FAR 52.212-2 has been tailored (see Addendum 3)

Addendum 3

FAR 52.212-2 Tailoring

The following paragraph is additional information for the price evaluation of the IDIQ CLINs in Schedule "B":

The government is not obligated to order beyond the minimum quantity even though the quantities below are utilized for evaluation purposes only. The government will evaluate proposed prices utilizing the projected ordering scenario delineated below: *(The quantities used are for evaluation purposes only, and are not considered to be construed as guaranteed quantities)*

480/ea (evaluation samples) of each round (see Instructions to Offerors -- Commercial Items (Oct 2000) (FAR 52.212-01))

Year 1: 50,000/ea of each round (1 order)

Year 2: 150,000/ea of each round (3 orders of 50,000/ea of each round)

Year 3: 150,000/ea of each round (3 orders of 50,000/ea of each round)

Year 4: 150,000/ea of each round (3 orders of 50,000/ea of each round)

Year 5: 150,000/ea of each round (3 orders of 50,000/ea of each round)

PAST PERFORMANCE

During the source selection process, the Government will assess the offeror's past performance in the evaluation for contract award. Accordingly, each offeror is required to submit a list of up to five of its most recent contracts within the past three years, either completed or on-going, for the same/similar products or services. It is preferred that these contracts be with U.S. government customers, but contracts with other commercial concerns are also acceptable. Offerors are authorized to provide information relative to any problems encountered on the identified contracts and any corrective actions taken by the offeror. The Source Selection Authority (SSA)/Contracting Officer will evaluate the offeror's past performance based upon the information furnished by the offeror and/or other information obtained by the Contracting Officer. The Contracting Officer is not responsible for locating or securing any information not furnished with the offer. The SSA/Contracting Officer may, however, utilize all available information, including information not provided by the offeror, in the past performance evaluation. The Government reserves the right to review less than all information submitted, and to only analyze sufficient information to make a reasonable determination of each offeror's past performance rating.

If insufficient information regarding the offeror's corporate history is available, the offeror is encouraged to submit for evaluation evidence of relevant past performance on the part of the offeror's key/principal employees, as either a prime- or sub-contractor.

Past performance is assessed by the SSA/Contracting Officer and is assigned a narrative rating in the evaluation. Each offeror will be given an adjectival rating on past performance: highly favorable, favorable, neither favorable nor unfavorable, unfavorable, highly unfavorable, or no same or similar history. Offerors who do not have same or similar past performance information reasonably available to the Contracting Officer will not be rated either favorable or unfavorable. The Government reserves the right to award to other than the lowest priced offer as set forth elsewhere in the solicitation. In addition, the Government may accept other than the lowest priced offer if doing so would result in greater value to the Government in terms of technical performance, quality, reliability, life cycle cost, or lower overall program risk. As a part of the past performance evaluation, the Government will assess the offeror's previous compliance with the requirements of FAR 52.219-8 and 52.219-9 as applicable.

OFFEROR REPRESENTATIONS AND CERTIFICATIONS -- COMMERCIAL ITEMS (APR 2001)(FAR 52.212-3) ALT I (FEB 2001)

(a) Definitions. As used in this provision:

"Emerging small business" means a small business concern whose size is no greater than 50 percent of the numerical size standard for the NAICS code designated.

"Forced or indentured child labor" means all work or service-

- (1) Exacted from any person under the age of 18 under the menace of any penalty for its nonperformance and for which the worker does not offer himself voluntarily; or
- (2) Performed by any person under the age of 18 pursuant to a contract the enforcement of which can be accomplished by process of penalties.

"Service-disabled veteran-owned small business concern"-

- (1) Means a small business concern-

- (i) Not less than 51 percent of which is owned by one or more service-disabled veterans or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more service-disabled veterans; and
- (ii) The management and daily business operations of which are controlled by one or more service-disabled veterans or, in the case of a veteran with permanent and severe disability, the spouse or permanent caregiver of such veteran.

- (2) Service-disabled veteran means a veteran, as defined in 38 U.S.C. 101(2), with a disability that is service-connected, as defined in 38 U.S.C. 101(16).

"Small business concern" means a concern, including its affiliates, that is independently owned and operated, not dominant in the field of operation in which it is bidding on Government contracts, and qualified as a small business under the criteria in 13 CFR Part 121 and size standards in this solicitation.

"Veteran-owned small business concern" means a small business concern-

(1) Not less than 51 percent of which is owned by one or more veterans(as defined at 38 U.S.C. 101(2)) or, in the case of any publicly owned business, not less than 51 percent of the stock of which is owned by one or more veterans; and

(2) The management and daily business operations of which are controlled by one or more veterans.

"Women-owned small business concern" means a small business concern --

(1) Which is at least 51 percent owned by one or more women or, in the case of any publicly owned business, at least 51 percent of the stock of which is owned by one or more women; and

(2) Whose management and daily business operations are controlled by one or more women.

"Women-owned business concern" means a concern which is at least 51 percent owned by one or more women; or in the case of any publicly owned business, at least 51 percent of the its stock is owned by one or more women; and whose management and daily business operations are controlled by one or more women.

(b) Taxpayer identification number (TIN) (26 U.S.C. 6109, 31 U.S.C. 7701). (Not applicable if the offeror is required to provide this information to a central contractor registration database to be eligible for award.)

(1) All offerors must submit the information required in paragraphs (b)(3) through (b)(5) of this provision to comply with debt collection requirements of 31 U.S.C. 7701(c) and 3325(d), reporting requirements of 26 U.S.C. 6041, 6041A, and 6050M, and implementing regulations issued by the Internal Revenue Service (IRS).

(2) The TIN may be used by the government to collect and report on any delinquent amounts arising out of the offeror's relationship with the Government (31 U.S.C. 7701(c)(3)). If the resulting contract is subject to the payment reporting requirements described in FAR 4.904, the TIN provided hereunder may be matched with IRS records to verify the accuracy of the offeror's TIN.]

(3) Taxpayer Identification Number (TIN).

* TIN: _____.

* TIN has been applied for.

* TIN is not required because:

* Offeror is a nonresident alien, foreign corporation, or foreign partnership that does not have income effectively connected with the conduct of a trade or business in the United States and does not have an office or place of business or a fiscal paying agent in the United States;

* Offeror is an agency or instrumentality of a foreign government;

* Offeror is an agency or instrumentality of the Federal Government;

(4) Type of organization.

* Sole proprietorship;

* Partnership;

* Corporate entity (not tax-exempt);

* Corporate entity (tax-exempt);

* Government entity (Federal, State, or local);

* Foreign government;

* International organization per 26 CFR 1.6049-4;

* Other _____.

(5) Common parent.

* Offeror is not owned or controlled by a common parent:

* Name and TIN of common parent:

Name _____

TIN _____

(c) Offerors must complete the following representations when the resulting contract is to be performed inside the United States, its territories or possessions, Puerto Rico, the Trust Territory of the Pacific Islands, or the District of Columbia. Check all that apply.

(1) Small business concern. The offeror represents as part of its offer that it * is, * is not a small business concern.

(2) Veteran-owned small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents as part of its offer that it * is, * is not a veteran-owned small business concern.

(3) Service-disabled veteran-owned small business concern. [Complete only if the offeror represented itself as a veteran-owned small business concern in paragraph (c)(2) of this provision.] The offeror represents as part of its offer that it * is, * is not a service-disabled veteran-owned small business concern.

(4) Small disadvantaged business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents, for general statistical purposes, that it * is, * is not, a small disadvantaged business concern as defined in 13 CFR 124.1002.

(5) Women-owned small business concern. [Complete only if the offeror represented itself as a small business concern in paragraph (c)(1) of this provision.] The offeror represents that it * is, * is not a women-owned small business concern.

Note: Complete paragraphs (c)(6) and (c)(7) only if this solicitation is expected to exceed the simplified acquisition threshold.

(6) Women-owned business concern (other than small business concern). [Complete only if the offeror is a women-owned business concern and did not represent itself as a small business concern in paragraph (c)(1) of this provision.]. The offeror represents that it * is, a women-owned business concern.

(7) Tie bid priority for labor surplus area concerns. If this is an invitation for bid, small business offerors may identify the labor surplus areas in which costs to be incurred on account of manufacturing or production (by offeror or first-tier subcontractors) amount to more than 50 percent of the contract price:

(8) Small Business Size for the Small Business Competitiveness Demonstration Program and for the Targeted Industry Categories under the Small Business Competitiveness Demonstration Program. [Complete only if the offeror has represented itself to be a small business concern under the size standards for this solicitation.]

(i) (Complete only for solicitations indicated in an addendum as being set-aside for emerging small businesses in one of the four designated industry groups (DIGs).) The offeror represents as part of its offer that it * is, * is not an emerging small business.

(ii) (Complete only for solicitations indicated in an addendum as being for one of the targeted industry categories (TICs) or four designated industry groups (DIGs).) Offeror represents as follows:

(A) Offeror's number of employees for the past 12 months (check the Employees column if size standard stated in the solicitation is expressed in terms of number of employees); or

(B) Offeror's average annual gross revenue for the last 3 fiscal years (check the Average Annual Gross Number of Revenues column if size standard stated in the solicitation is expressed in terms of annual receipts).

(Check one of the following):

Number of Employees	Average Annual Gross Revenues
50 or fewer	\$1 million or less
51-100	\$1,000,001-\$2 million
101-250	\$2,000,001-\$3.5 million
251-500	\$3,500,001-\$5 million
501-750	\$5,000,001-\$10 million
751-1,000	\$10,000,001-\$17 million
Over 1,000	Over \$17 million

(9) [Complete only if the solicitation contains the clause at FAR 52.219-23, Notice of Price Evaluation Adjustment for Small Disadvantaged Business Concerns, or FAR 52.219-25, Small Disadvantaged Business Participation Program-Disadvantaged Status and Reporting, and the offeror desires a benefit based on its disadvantaged status.]

(i) General. The offeror represents that either-

(A) It * is, * is not certified by the Small Business Administration as a small disadvantaged business concern and identified, on the date of this representation, as a certified small disadvantaged business concern in the database maintained by the Small Business Administration (PRO-Net), and that no material change in disadvantaged ownership and control has occurred since its certification, and, where the concern is owned by one or more individuals claiming disadvantaged status, the net worth of each individual upon whom the certification is based does not exceed \$750,000 after taking into account the applicable exclusions set forth at 13 CFR 124.104(c)(2); or

(B) It *has, * has not submitted a completed application to the Small Business Administration or a Private Certifier to be certified as a small disadvantaged business concern in accordance with 13 CFR 124, Subpart B, and a decision on that application is pending, and that no material change in disadvantaged ownership and control has occurred since its application was submitted.

(ii) Joint Ventures under the Price Evaluation Adjustment for Small Disadvantaged Business Concerns. The offeror represents, as part of its offer, that it is a joint venture that complies with the requirements in 13 CFR 124.1002(f) and that the representation in paragraph (c)(7)(i) of this provision is accurate for the small disadvantaged business concern that is participating in the joint venture. [The offeror shall enter the name of the small disadvantaged business concern that is participating in the joint venture: _____.]

(d) Representations required to implement provisions of Executive Order 11246 --

(1) Previous contracts and compliance. The offeror represents that --

(i) It * has, * has not, participated in a previous contract or subcontract subject to the Equal Opportunity clause of this solicitation; and

(ii) It * has, * has not, filed all required compliance reports.

(2) Affirmative Action Compliance. The offeror represents that --

(i) It * has developed and has on file, * has not developed and does not have on file, at each establishment, affirmative action programs required by rules and regulations of the Secretary of Labor (41 CFR parts 60-1 and 60-2), or

(ii) It * has not previously had contracts subject to the written affirmative action programs requirement of the rules and regulations of the Secretary of Labor.

(e) Certification Regarding Payments to Influence Federal Transactions (31 U.S.C. 1352). (Applies only if the contract is expected to exceed \$100,000.) By submission of its offer, the offeror certifies to the best of its knowledge and belief that no Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress or an employee of a Member of Congress on his or her behalf in connection with the award of any resultant contract.

(f) Buy American Act - Balance of Payments Program Certificate. (Applies only if the clause at Federal Acquisition Regulation (FAR) 52.225-1, Buy American Act - Balance of Payments Program--Supplies, is included in this solicitation.)

(1) The offeror certifies that each end product, except those listed in paragraph (f)(2) of this provision, is a domestic end product (as defined in the clause of this solicitation entitled "Buy American Act - Balance of Payments Program--Supplies") and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products.

(2) Foreign End Products:

LINE ITEM NO.	COUNTRY OF ORIGIN

[List as necessary]

(3) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(g)

(1) Buy American Act -- North American Free Trade Agreement -- Israeli Trade Act -- Balance of Payments Program Certificate. (Applies only if the clause at FAR 52.225-3, Buy American Act -- North American Free Trade Agreement Israeli Trade Act -- Balance of Payments Program, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(1)(ii) or (g)(1)(iii) of this provision, is a domestic end product as defined in the clause of this solicitation entitled "Buy American Act -- North American Free Trade Agreement Israeli Trade Act -- Balance of Payments Program" and that the offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States.

(g)(1)

(ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American Act -- North American Free Trade Agreement -- Israeli Trade Act -- Balance of Payments Program":

Canadian End Products

Line Item No.:

(List as necessary)

(iii) The offeror shall list those supplies that are foreign end products (other than those listed in paragraph (g)(1)(ii) or this provision) as defined in the clause of this solicitation entitled "Buy American Act-North American Free Trade Agreement-Israeli Trade Act-Balance of Payments Program." The offeror shall list as other foreign end products those end products manufactured in the United States that do not qualify as domestic end products.

Other Foreign End Products:

LINE ITEM NO.	COUNTRY OF ORIGIN

[List as necessary]

(iv) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25.

(2) Buy American Act-North American Free Trade Agreements-Israeli Trade Act-Balance of Payments Program Certificate, Alternate I (Feb 2000). If Alternate I to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)

(ii) The offeror certifies that the following supplies are Canadian end products as defined in the clause of this solicitation entitled "Buy American Act-North American Free Trade Agreement-Israeli Trade Act-Balance of Payments Program":

Canadian End Products

Line Item No.: _____

[List as necessary]

(3) Buy American Act-North American Free Trade Agreements-Israeli Trade Act-Balance of Payments Program Certificate, Alternate II (Feb 2000). If Alternate II to the clause at FAR 52.225-3 is included in this solicitation, substitute the following paragraph (g)(1)(ii) for paragraph (g)(1)(ii) of the basic provision:

(g)(1)(ii) The offeror certifies that the following supplies are Canadian end products or Israeli end products as defined in the clause of this solicitation entitled "Buy American Act--North American Free Trade Agreement--Israeli Trade Act--Balance of Payments Program":

Canadian or Israeli End Products

Line Item No.:	Country of Origin:

[List as necessary]

(4) Trade Agreements Certificate. (Applies only if the clause at FAR 52.225-5, Trade Agreements, is included in this solicitation.)

(i) The offeror certifies that each end product, except those listed in paragraph (g)(4)(ii) of this provision, is a U.S.-made, designated country, Caribbean Basin country, or NAFTA country end product, as defined in the clause of this solicitation entitled "Trade Agreements."

(ii) The offeror shall list as other end products those end products that are not U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products.

Other End Products

Line Item No.:	Country of Origin:

[List as necessary]

(iii) The Government will evaluate offers in accordance with the policies and procedures of FAR Part 25. For line items subject to the Trade Agreements Act, the Government will evaluate offers of U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products without regard to the restrictions of the Buy American Act or the Balance of Payments Program. The Government will consider for award only offers of U.S.-made, designated country, Caribbean Basin country, or NAFTA country end products unless the Contracting Officer determines that there are no offers for such products or that the offers for such products are insufficient to fulfill the requirements of the solicitation.

(h) Certification Regarding Debarment, Suspension or Ineligibility for Award (Executive Order 12549). (Applies only if the contract value is expected to exceed the simplified acquisition threshold.) The offeror certifies, to the best of its knowledge and belief, that --

(1) The offeror and/or any of its principals * are, * are not presently debarred, suspended, proposed for debarment, or declared ineligible for the award of contracts by any Federal agency;

(2) * Have, * have not, within the three-year period preceding this offer, been convicted of or had a civil judgment rendered against them for: commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a Federal, state or local government contract or subcontract; violation of Federal or state antitrust statutes relating to the submission of offers; or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, tax evasion, or receiving stolen property;

(3) * Are, * are not presently indicted for, or otherwise criminally or civilly charged by a Government entity with, commission of any of these offenses; and

(4)

(i) The offeror, aside from the offenses enumerated in paragraphs (1), (2), and (3) of this paragraph (h), *has *has not within the past three years, relative to tax, labor and employment, environmental, antitrust, or consumer protection laws--

- (A) Been convicted of a Federal or state felony (or has any Federal or state felony indictments currently pending against them); or
- (B) Had a Federal court judgment in a civil case brought by the United States rendered against them; or
- (C) Had an adverse decision by a Federal administrative law judge, board, or commission indicating a willful violation of law.

(ii) If the offeror has responded affirmatively, the offeror shall provide additional information requested by the Contracting Officer.

(i) Certification Regarding Knowledge of Child Labor for Listed End Products (Executive Order 13126). [The Contracting Officer must list in paragraph (i)(1) any end products being acquired under this solicitation that are included in the List of Products Requiring Contractor Certification as to Forced or Indentured Child Labor, unless excluded at 22.1503(b).]

(1) Listed End Product

Listed End Product	Listed Countries of Origin:

(2) Certification. [If the Contracting Officer has identified end products and countries of origin in paragraph (i)(1) of this provision, then the offeror must certify to either (i)(2)(i) or (i)(2)(ii) by checking the appropriate block.]

☐ (i) The offeror will not supply any end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product.

☐ (ii) The offeror may supply an end product listed in paragraph (i)(1) of this provision that was mined, produced, or manufactured in the corresponding country as listed for that product. The offeror certifies that it has made a good faith effort to determine whether forced or indentured child labor was used to mine, produce, or manufacture any such end product furnished under this contract. On the basis of those efforts, the offeror certifies that it is not aware of any such use of child labor.

(End of Provision)

OFFEROR REPRESENTATIONS AND CERTIFICATIONS--COMMERCIAL ITEMS (DFAR 252.212-7000) (NOV 1995)

(a) *Definitions.*

As used in this clause--

(1) "Foreign person" means any person other than a United States person as defined in Section 16(2) of the Export Administration Act of 1979 (50 U.S.C. App. Sec. 2415).

(2) "United States person" defined in Section 16(2) of the Export Administration Act of 1979 and means any United States resident or national (other than an individual resident outside the United States and employed by other than a United States person), any domestic concern (including any permanent domestic establishment of any foreign concern), and any foreign subsidiary or affiliate (including any permanent foreign establishment) of any domestic concern which is controlled in fact by such domestic concern, as determined under regulations of the President.

(b) *Certifications.*

By submitting this offer, the Offeror, if a foreign person, company or entity, certifies that it--

(1) Does not comply with the Secondary Arab Boycott of Israel; and

(2) Is not taking or knowingly agreeing to take any action, with respect to the Secondary Boycott of Israel by Arab countries, which 50 U.S.C. App. Sec. 2407(a) prohibits a United States person from taking.

(c) *Representation of extent of Transportation by Sea.* (This representation does not apply to solicitations for the direct purchase of ocean transportation services).

(1) The Offeror shall indicate by checking the appropriate blank in paragraph (c)(2) of this provision whether transportation of supplies by sea is anticipated under the resultant contract. The term "supplies" is defined in the Transportation of Supplies by Sea clause of this solicitation.

(2) *Representation.*

The offeror represents that it--

_____ Does anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

_____ Does not anticipate that supplies will be transported by sea in the performance of any contract or subcontract resulting from this solicitation.

(3) Any contract resulting from this solicitation will include the Transportation of Supplies by Sea clause. If the Offeror represents that it will not use ocean transportation, the resulting contract will also include the Defense Federal Acquisition Regulation Supplement clause at 252.247-7024, Notification of Transportation of Supplies by Sea.

**BUY AMERICAN--BALANCE OF PAYMENTS PROGRAM CERTIFICATE (SEP 1999)
(DFARS 252.225-7000)**

(a) *Definitions.* "Domestic end product," "qualifying country," "qualifying country end product," and "nonqualifying country end product" have the meanings given in the Buy American Act and Balance of Payments Program clause of this solicitation.

(b) *Evaluation.* Offers will be evaluated by giving preference to domestic end products and qualifying country end products over nonqualifying country end products.

(c) *Certifications.*

(1) The Offeror certifies that-

(i) Each end product, except those listed in paragraphs (c)(2) or (3) of this provision, is a domestic end product; and

(ii) Components of unknown origin are considered to have been mined, produced, or manufactured outside the United States or a qualifying country.

(2) The Offeror certifies that the following end products are qualifying country end products:

Qualifying Country End Products

Line Item Number

Country of Origin

(List only qualifying country end products.)

(3) The Offeror certifies that the following end products are nonqualifying country end products:

Nonqualifying Country End Products

Line Item Number

Country of Origin (If known)

(End of provision)

QUALIFYING COUNTRY SOURCES AS SUBCONTRACTORS (DEC 1991) (DFAR 252.225-7002)

Subject to the restrictions in section 225.872 of the Defense FAR Supplement, the Contractor shall not preclude qualifying country sources and U.S. sources from competing for subcontracts under this contract.

CONTRACTOR PERFORMANCE DATA

The offeror shall demonstrate past performance through completion of the "Contractor Performance Data Sheet". The Contractor Performance Data Sheet shall be completed in its entirety. Data other than that requested on the Contractor Performance Data Sheet will not be considered. Additionally, offerors are urged to submit brief and concise responses, within the confines of the space allotted. *Failure to submit the completed Contractor Performance Data Sheet (along with the proposal) shall be considered certification (by signature on the proposal) that the contractor has no past performance for like or similar items for the Government to evaluate.*

CONTRACTOR PERFORMANCE DATA SHEET

NOTE: THE INFORMATION PROVIDED MAY BE USED TO EVALUATE THE OFFEROR'S PAST PERFORMANCE IN MEETING COSTS/PRICE, TECHNICAL, AND DELIVERY OBJECTIVES. POINTS OF CONTACT PROVIDED, MAY BE CONTACTED TO CONFIRM INFORMATION PROVIDED AND TO GATHER INFORMATION ON TECHNICAL PERFORMANCE, QUALITY, LIFE CYCLE COST AND/OR RELIABILITY. THE RESULTS MAY BE USED IN THE OVERALL COMPARATIVE EVALUATION OF THE OFFEROR (S) IN ACCORDANCE WITH SECTION M OF THE REQUEST FOR PROPOSAL.

Please list performance data on a maximum of five contracts for like or similar items, either completed or ongoing, under which performance has taken place within the last three years. Contracts with the federal government are preferred, but you may also list contracts with state and local governments or contracts with commercial customers. In determining which

contracts to submit, please refer to FAR 15. 305(a)(2)(I), which states in pertinent part that “[p]ast performance information is one indicator of an offeror's ability to perform the contract successfully. The currency and relevance of the information, source of the information, context of the data, and general trends in contractor's performance shall be considered in making the award decision...”. The Government reserves the right to not consider any information submitted exceeding the five-contract limitation.

Past Performance Information	
Contractor Name:	RFP #:
Address:	POC: (Person who can verify data)
Division:	Telephone:
	FAX:

CONTRACT INFORMATION

Contract Number:	Date Completed:
Contract Type: Fixed Price	Cost Reimbursement Other (Specify)
Item Description:	
Contract Quantity/Length of Service:	
Customer Name:	Customer POC: (Person who can verify data)
Address:	Telephone:
	FAX:

QUALITY

NOTE: An explanation must accompany all answers with an asterisk(*).

Was consideration or a monetary withhold for non-conforming supplies/services or late deliveries assessed against this contract?

YES* ____ NO ____ (Explanation)

Was/is any part of this contract terminated for default and/or litigation?

YES* ____ NO ____ (Explanation)

Was any warranty work completed on delivered items?

YES* ____ NO ____ (Explanation)

Did you receive any quality awards in the past three years?

YES* ____ NO ____ (List Awards)

TIMELINESS

Were all items (including products, services, reports, etc.) delivered within the original contract schedule?

YES ____ NO * ____ (Explanation)

COST FOR COST TYPE CONTRACTS:

Was the original contract estimated cost met?

YES ____ NO* ____ (Explanation)

If the estimated cost was not met, what was the positive/negative percentage of change?

+_____-

OTHER PERTINENT INFORMATION

Describe any corrective action(s) initiated to solve any of the above-described problems/deficiencies on this contract. Discuss the success of the corrective action(s) taken.

CONTRACT DATA REQUIREMENTS LIST (1 Data Item)						Form Approved OMB No. 0704-0188			
Public reporting burden for this collection of information is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.									
A. CONTRACT LINE ITEM NO.			B. EXH/ATCH NO.		C. CATEGORY TDP _____ TM _____ OTHER <u>X</u>				
D. SYSTEM / ITEM 40mm Rubber Ball & 40mm Foam Rubber Baton			E. CONTRACT / PR NO. N00164-01-		F. CONTRACTOR				
1. DATA ITEM NO. A002		2. TITLE OF DATA ITEM Engineering Change Proposal				3. SUBTITLE ECP			
5. AUTHORITY (Data acquisition Document No.) DI-CMAN-80639B			5. CONTRACT REFERENCE SOW PARA 3.1.3.1			6. REQUIRING OFFICE CODE 403			
7. DD 250 REQ LT		9. DIST STATEMENT REQUIRED B		10. FREQUENCY ASREQ		12. DATE OF FIRST SUBMISSION ASGEN			
8. APP CODE A		11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION		14. DISTRIBUTION			
16. REMARKS BLOCK 4: Block 10 of Data Item Description para. 10.2- Submit the ECP using Appendix D of MIL-STD-793 as guidance. BLOCK 7: Submit Info Copy only of LT to: COMMANDER CODE 1162, BLDG. 2521 NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE, IN 47522-5001 BLOCK 8: Government will approve/disapprove in writing, within 15 calendar days from receipt.. BLOCK 9: <u>DISTRIBUTION STATEMENT B:</u> "Distribution authorized to U.S. Government agencies only (Proprietary Information as of 11 March 1999). Other requests for this document shall be referred to COMMANDER, NAVSURFWARCENDIV, CODE 403, 300 HIGHWAY 361, CRANE IN 47522-5001. BLOCK 6 & 14a : COMMANDER CODE 403DJ, BLDG 2524 NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE IN 47522-5001 Block 14b: Text deliverables shall be on white bond 8.5" x 11". Other Deliverables shall be submitted in an electronic format specified by the Government to: jones_dj@crane.navy.mil						a. ADDRESSEE		b. COPIES	
						NSWC 403DJ		1	
						15. TOTAL			
G. PREPARED BY Dennis J. Jones			H. DATE		I. APPROVED BY Theresa Andis		J. DATE		

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CONTRACT DATA REQUIREMENTS LIST (1 Data Item)						Form Approved OMB No. 0704-0188								
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A. CONTRACT LINE ITEM NO.		B. EXH/ATCH NO.		C. CATEGORY TDP _____ TM _____ OTHER <u>X</u> _____										
D. SYSTEM / ITEM 40mm Rubber Ball & 40mm Foam Rubber Baton			E. CONTRACT / PR NO. N00164-01-		F. CONTRACTOR									
1. DATA ITEM NO. A005		2. TITLE OF DATA ITEM Technical Data for Munitions (TDM)			3. SUBTITLE									
8. AUTHORITY (Data acquisition Document No.) DI-SAFT-80182B			5. CONTRACT REFERENCE SOW PARA 3.1.3.2		6. REQUIRING OFFICE CODE 403									
7. DD 250 REQ LT		9. DIST STATEMENT REQUIRED B		10. FREQUENCY ONE/R		12. DATE OF FIRST SUBMISSION 60DAC								
8. APP CODE A		11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION		14. DISTRIBUTION								
						<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th rowspan="2" style="width: 30%;">a. ADDRESSEE</th> <th colspan="3" style="text-align: center;">b. COPIES</th> </tr> <tr> <th style="width: 10%;">DRAFT</th> <th style="width: 10%;">REG</th> <th style="width: 10%;">FINAL REPO</th> </tr> </table>		a. ADDRESSEE	b. COPIES			DRAFT	REG	FINAL REPO
a. ADDRESSEE	b. COPIES													
	DRAFT	REG	FINAL REPO											
16. REMARKS BLOCK 4: Preparation Instruction Notes: (address all items unless deleted) 10.1.1b Include – Weight, Length, Case Diameter and Rim Diameter 10.1.1c Include - Muzzle Velocity (measured @ 3ft.), Maximum Flight Distance, Maximum Effective Range and Chamber Pressure 10.1.1d Include – Propellant & Primer 10.1.2a(4) &(5) – DELETE 10.1.2b (3) & (4) – DELETE 10.1.2c Include only – Quantity-Distance Class, Storage Compatibility Group, 10.1.2d – Include UNO Serial No., DOT Class, DOT Marking and POP Markings 10.1.2e, f, g & h – DELETE BLOCK 7: Submit Info Copy only of LT to: COMMANDER CODE 1162, BLDG. 2521 NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE, IN 47522-5001 BLOCK 8: Government will approve/disapprove in writing, within 15 calendar days after receipt. BLOCK 9: <u>DISTRIBUTION STATEMENT B:</u> “Distribution authorized to U.S. Government agencies only (Proprietary Information as of 11 March 1999). Other requests for this document shall be referred to COMMANDER, NAVSURFWARCENDIV, CODE 403, 300 HIGHWAY 361, CRANE IN 47522-5001.”				NSWC 403DJ		1	1							
				15. TOTAL				1	1	0				
G. PREPARED BY Dennis J. Jones			H. DATE		I. APPROVED BY Theresa Andis		J. DATE							

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A. CONTRACT LINE ITEM NO.		B. EXH/ATCH NO.		C. CATEGORY TDP _____ TM _____ OTHER <input checked="" type="checkbox"/> _____			
D. SYSTEM / ITEM 40mm Rubber Ball & 40mm Foam Rubber Baton			E. CONTRACT / PR NO. N00164-01-		F. CONTRACTOR		
1. DATA ITEM NO. A005		2. TITLE OF DATA ITEM			3. SUBTITLE		
9. AUTHORITY (Data acquisition Document No.)			5. CONTRACT REFERENCE			6. REQUIRING OFFICE	
7. DD 250 REQ		9. DIST STATEMENT REQUIRED		10. FREQUENCY		12. DATE OF FIRST SUBMISSION	
8. APP CODE		B		11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION	
14. DISTRIBUTION						a. ADDRESSEE	
						b. COPIES	
						DRAFT	
						REG	
						REPO	
16. REMARKS						15. TOTAL	
BLOCK 6, 14a: COMMANDER CODE 403DJ, BLDG 2524 NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE IN 47522-5001 Block 14b: Deliverables shall be submitted electronically via e-mail. The Contractor shall ensure all attachments are compatible with Microsoft 97 software. The deliverable shall be electronically transmitted to: jones_dj@crane.navy.mil						See Block 16 1 1 0	
G. PREPARED BY Dennis J. Jones						H. DATE	
I. APPROVED BY Theresa Andis						J. DATE	

CONTRACT DATA REQUIREMENTS LIST (1 Data Item)						Form Approved OMB No. 0704-0188		
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A. CONTRACT LINE ITEM NO.		B. EXH/ATCH NO.		C. CATEGORY TDP _____ TM _____ OTHER <input checked="" type="checkbox"/> X _____				
D. SYSTEM / ITEM 40mm Rubber Ball & 40mm Foam Rubber Baton			E. CONTRACT / PR NO. N00164-01-		F. CONTRACTOR			
1. DATA ITEM NO. A006		2. TITLE OF DATA ITEM Ammunition Data Card			3. SUBTITLE Sample Ammunition Data Card			
10. AUTHORITY (Data acquisition Document No.) DI-MISC-80043A			5. CONTRACT REFERENCE SOW PARA 3.1.4.1		6. REQUIRING OFFICE CODE 403			
7. DD 250 REQ LT		9. DIST STATEMENT REQUIRED B		10. FREQUENCY OTIME		12. DATE OF FIRST SUBMISSION ASREQ		
8. APP CODE A		11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION		14. DISTRIBUTION		
16. REMARKS						a. ADDRESSEE b. COPIES DRAFT REG FINAL REPO		
BLOCK 4: Submission to consist of completed hardcopy of a sample page generated by the ALRAM computer software program containing necessary Information (See MIL-STD-1168, Paragraph 4.3.1.4). BLOCK 7: Submit Info Copy only of LT to: COMMANDER CODE 1162, BLDG. 2521 NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE, IN 47522-5001 BLOCK 8: Government approval/disapproval in writing, within 30 calendar days after receipt. BLOCK 9: <u>DISTRIBUTION STATEMENT B:</u> "Distribution authorized to U.S. Government agencies only (Proprietary Information as of 11 March 1999). Other requests for this document shall be referred to COMMANDER, NAVSURFWARCENDIV, CODE 403, 300 HIGHWAY 361, CRANE IN 47522-5001. BLOCK 6, 14a: COMMANDER CODE 403DJ, BLDG 2524 NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE IN 47522-5001 BLOCK 14b: Text deliverables shall be on white bond 8.5" x 11". Other Deliverable shall be submitted in an electronic form specified by the Government to: jones_dj@crane.navy.mil		NSWC 403DJ 1 1		15. TOTAL 1 1 0				
G. PREPARED BY Dennis J. Jones			H. DATE		I. APPROVED BY Theresa Andis		J. DATE	

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A. CONTRACT LINE ITEM NO.		B. EXH/ATCH NO.		C. CATEGORY TDP _____ TM _____ OTHER <input checked="" type="checkbox"/> X _____					
D. SYSTEM / ITEM 40mm Rubber Ball & 40mm Foam Rubber Baton			E. CONTRACT / PR NO. N00164-01-		F. CONTRACTOR				
1. DATA ITEM NO. A008	2. TITLE OF DATA ITEM Test Plan				3. SUBTITLE Lot Acceptance Test Plan				
12. AUTHORITY (Data acquisition Document No.) DI-NDTI-80566			5. CONTRACT REFERENCE SOW PARA 3.1.6.1		6. REQUIRING OFFICE CODE 403				
7. DD 250 REQ LT	9. DIST STATEMENT REQUIRED B	10. FREQUENCY OTIME	12. DATE OF FIRST SUBMISSION 60DAC		14. DISTRIBUTION				
8. APP CODE A		11. AS OF DATE	13. DATE OF SUBSEQUENT SUBMISSION 85DARC		a. ADDRESSEE	b. COPIES			
						DRAFT	FINAL REG REPO		
16. REMARKS BLOCK 7: Submit Info Copy only of LT to: COMMANDER CODE 1162, BLDG. 2521 NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE, IN 47522-5001 BLOCK 8: Government approval/disapproval within 10 calendar days from Receipt. BLOCK 9: DISTRIBUTION STATEMENT B: "Distribution authorized to U.S. Government agencies only (Proprietary Information as of 11 March 1999). Other requests for this document shall be referred to COMMANDER, NAVSURFWARCENDIV, CODE 403, 300 HIGHWAY 361, CRANE IN 47522-5001. BLOCK 6, 14a: COMMANDER CODE 403DJ, BLDG 2524 NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE IN 47522-5001 Block 14b: Deliverables shall be submitted in an electronic format specified by the Government to: jones_dj@crane.navy.mil						NSWC 403DJ	1	1	
						15. TOTAL			
G. PREPARED BY Dennis J. Jones			H. DATE	I. APPROVED BY Theresa Andis		J. DATE			

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A. CONTRACT LINE ITEM NO.		B. EXH/ATCH NO.		C. CATEGORY TDP _____ TM _____ OTHER <input checked="" type="checkbox"/> X _____							
D. SYSTEM / ITEM 40mm Rubber Ball & 40mm Foam Rubber Baton			E. CONTRACT / PR NO. N00164-01-		F. CONTRACTOR						
1. DATA ITEM NO. A010		2. TITLE OF DATA ITEM Certification/Data Report			3. SUBTITLE Certificate of Compliance						
14. AUTHORITY (Data acquisition Document No.) DI-MISC-80678			5. CONTRACT REFERENCE SOW PARA 4.2.5		6. REQUIRING OFFICE CODE 403						
7. DD 250 REQ LT		9. DIST STATEMENT REQUIRED B		10. FREQUENCY ASREQ		12. DATE OF FIRST SUBMISSION ASGEN					
8. APP CODE		11. AS OF DATE		13. DATE OF SUBSEQUENT SUBMISSION		14. DISTRIBUTION					
16. REMARKS BLOCK 4: Preparation Instruction Notes: (address all items unless deleted) 10.2.1, 10.2.2, & 10.2.3 – DELETE 10.3 – See Appendix E of performance specification 10.4 – DELETE BLOCK 7: Submit Info Copy only of LT to: COMMANDER CODE 1162, BLDG. 2521 NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE, IN 47522-5001 BLOCK 9: DISTRIBUTION STATEMENT B: “Distribution authorized to U.S. Government agencies only (Proprietary Information as of 11 March 1999). Other requests for this document shall be referred to COMMANDER, NAVSURFWARCENDIV, CODE 403, 300 HIGHWAY 361, CRANE IN 47522-5001. BLOCK 11,12,13: First Report due 1 week after completing first lot Acceptance tests. Subsequent reports due 1 week after completing each lot Acceptance testing. BLOCK 6, 14a: COMMANDER CODE 403DJ, BLDG 2524 NAVSURFWARCENDIV 300 HIGHWAY 361 CRANE IN 47522-5001 Block 14b: Deliverables shall be submitted in an electronic format specified by the Government to: jones_dj@crane.navy.mil						a. ADDRESSEE		b. COPIES			
								DRAFT		FINAL REG REPO	
						NSWC 403DJ		1			
						15. TOTAL					
G. PREPARED BY Dennis J. Jones			H. DATE		I. APPROVED BY Theresa Andis		J. DATE				

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SPECIFICATION

**CARTRIDGE, 40MM, RUBBER BALL, &
CARTRIDGE, 40MM FOAM RUBBER BATON
NON-LETHAL**

CRANE DIVISION
NAVAL SURFACE WARFARE CENTER
ORDNANCE ENGINEERING DIRECTORATE (40)
MARINE CORPS & AMMO LOGISTICS DEPARTMENT (403)
MARINE CORPS AMMUNITION BRANCH (4033)

	ACTIVITY APPROVALS	CODE	DATE
PREPARER		403DJ	
ACQUISITION MANAGER		4033	
403 PROCUREMENT REP.		403NB	
QUALITY MANAGER		4091	
DEPARTMENT DIRECTOR		403	

DISTRIBUTION STATEMENT B. DISTRIBUTION AUTHORIZED TO U.S. GOVERNMENT AGENCIES ONLY (PROPRIETARY INFORMATION AS OF 11 MARCH 1999). OTHER REQUESTS SHALL BE REFERRED TO COMMANDER, CODE 403, NAVSURFWARCENDIV CRANE, IN 47522-5001.

WARNING - THIS DOCUMENT CONTAINS TECHNICAL DATA WHOSE EXPORT IS RESTRICTED BY THE ARMS EXPORT CONTROL ACT, (TITLE 22, U.S.C..., SEC. 2751 ET SEQ.) OR THE EXPORT ADMINISTRATION ACT OF 1979, AS AMENDED, TITLE 50, U.S.C., APP 2401, ET SEQ. VIOLATIONS OF THESE EXPORT LAWS ARE SUBJECT TO SEVERE CRIMINAL PENALTIES. DISSEMINATE IAW PROVISIONS OF DOD DIRECTIVE 5230.25.

DESTRUCTION NOTICE: DESTROY BY ANY METHOD THAT WILL PREVENT DISCLOSURE OF CONTENTS OR RECONSTRUCTION OF THE DOCUMENT.

SPECIFICATION
CARTRIDGE, 40MM, RUBBER BALL, &
CARTRIDGE, 40MM FOAM RUBBER BATON
NON-LETHAL

1. SCOPE.

1.1 This specification establishes the product and performance requirements for the following Non- Lethal Cartridges:

1.1.1 Cartridge, 40mm, Rubber Ball. This ammunition shall be referred to hereafter as the 40mm Rubber Ball cartridge. It is intended for use in crowd control situations where the use of non-lethal force is desired. However, this does not imply that the cartridge is incapable of causing fatalities.

1.1.2 Cartridge, 40mm, Foam Rubber Baton. This ammunition shall be referred to hereafter as the 40mm Foam Rubber Baton cartridge. It is intended for use in crowd control situations where the use of non-lethal force is desired. However, this does not imply that the cartridge is incapable of causing fatalities.

2. APPLICABLE DOCUMENTS.

2.1 Government Documents. The following documents of the exact issues shown form a part of the specification to the extent specified herein. In the event of a conflict between this specification and other documents referenced herein, the requirements of this specification shall apply.

Specifications

Military

MIL-P-15011K	Pallets, Material Handling,
	Wood Post Construction, 4-Way Entry
MIL-B-46506B	Boxes, Ammunition Packing
	Wood Wirebound

Standards

Military

MIL-STD-129N	Marking for Shipment and Storage
MIL-STD-331B	Fuze and Fuze Components, Environmental and Performance Tests for
MIL-STD-644A	Visual Inspection Standards and Inspection Standards for Inspection of Packaging, Packing and Marking of Small Arms Ammunition
MIL-STD-709C	Ammunition Color Coding

MIL-STD-810E Guidelines	Environmental Test Methods and Engineering
MIL-STD-1168B	Ammunition Lot Numbering and Ammunition Data Cards
MIL-STD-1322A	Unit Load for Domestic and Overseas Shipment
MIL-STD-1916	DOD Preferred Methods for Acceptance of Products
MIL-STD-2073/1D	Standard Practice For Military Packaging
MIL-STD-2105B	Hazard Assessment Tests for Non-Nuclear Munitions
DOD-STD-2101	Classification of Characteristics No Revision
MIL-A-48078	General Specification for Standard Quality
MIL-P-46610E	Primers, Percussion, Styphnate and Chlorate Types, for Small Arms Ammunition
SW010-AD-GTP-010	Navy Qualified Formulations

Drawings

53711-7232153	Packing and Marking for Box, M2A1 for Cartridge, 40mm Non-Lethal
53711-7232154	Packing and Marking for Box, Wirebound for Cartridge, 40mm Non-Lethal
19200-7553296H	Box, Ammunition, M2A1
19200-7553347L	Box, Wirebound for Boxes, Ammunition, M2A1
19200-7643674	Classification of cartridge case defect, small arms ammunition
19200-9395772	Wirebound Box Assembly
19200-9396196	Carton, Paperboard

(Copies of specifications and standards required by suppliers in connection with specific procurement functions should be obtained from Commanding Officer, Naval Publications and Forms Center (Code 105), 5801 Tabor Ave., Philadelphia, PA 19120. If not available, advise contracting activity. World Wide Web Address: <http://astimage.daps.dla.mil/quicksearch/>).

2.2. Non-Government Documents. The following documents of the exact issues show formal part of this specification to the extent specified herein. In the event of conflict between this specification and other documents referenced herein, the requirements of this specification shall apply.

ISO 9001	International Standard, Quality Systems - Model for Quality Assurance in Design, Development, Production, Installation, and Service
ANSI/ASQC A8402-1994	Quality Management and Quality Assurance - Vocabulary
ANSI Y14.5	Dimensioning and Tolerancing for Engineering Drawings
ASTM D2240	Standard test Method for Rubber Products-Durometer Hardness

3. REQUIREMENTS.

3.1. General.

3.1.1. Item Definition. The cartridges described by this specification are the 40mm Rubber Ball cartridge and 40mm Foam Rubber Baton. These cartridges are low-velocity rounds designed to be used in the M203 grenade launcher.

3.1.2. Precedence. The cartridges shall comply in order of precedence with the contract, this specification and documents referenced herein.

3.1.3. Configuration Management. The design and configuration of all item components to successfully pass the Government Performed Qualification Test Program of paragraph 3.1.5, will become a design baseline. The contractor shall have or establish a configuration management process that will identify the baseline design and allow for changes or deviations of such established baseline design. The contractor shall submit, to the Government, a Configuration Management Plan covering all design components as well as the process by which proposed changes will be generated and submitted (CDRL A001 applies).

3.1.3.1 Contractor proposed changes to the Government qualified baseline components or item performance shall be approved prior to manufacture. As applicable, the contractor shall submit Engineering Change Proposal (ECP) to the Government in accordance with CDRL A002; Request for Deviations (RFD) in accordance with CDRL A003 and Requests for Waivers (RFW) in accordance with CDRL A004 when requesting a change to the qualified baseline of components or performance. The Contracting Officer will notify the vendor of approval for each ECP, RFD or RFW.

3.1.3.2. All drawings will conform to ANSI-Y14.5-1994 as follows: Dimensions and Tolerances shall be in compliance with ANSI Y14.5". Contractor shall provide Technical Data for Munitions to the Government in accordance with CDRL A005.

3.1.4. AMMUNITION DATA CARD.

3.1.4.1 Sample Ammunition Data Cards shall be provided to the Government for review and approval prior to commencing full production. (CDRL A006 applies.)

3.1.4.2. The Ammunition Data Cards shall be submitted to NSWC Crane representative for approval prior to electronic submission to Rock Island and NSWC Crane. Ammunition Data Cards shall be furnished with production items to the Government in accordance with MIL-STD-1168B. (CDRL A007 applies.)

3.1.5 GOVERNMENT PERFORMED QUALIFICATION TEST PROGRAM

3.1.5.1 A Qualification Test Program will be performed by the Government to ensure that the environmental/handling conditions, to which the 40 MM cartridges will be exposed, will not affect the safety or performance of the cartridges. This test program is designed to simulate storage, transportation, field handling and operational use conditions to which

the cartridges can be exposed. The Government will subject the cartridges to a sequence of life cycle, safety and environmental test conditions. Subsequently, these cartridges will be fired at $+70^{\circ} \pm 5^{\circ}\text{F}$, $+120^{\circ} +5/-^{\circ}\text{F}$ and $0^{\circ} +0/-5^{\circ}\text{F}$ temperature conditions to verify that the cartridges still meet the velocity and functional performance requirements as defined by paragraphs 3.3, 3.4 and 3.5. The contractor shall produce 40 MM rubber ball and foam rubber baton cartridges capable of meeting velocity and functional requirements after exposure to these life cycle, safety and environmental test conditions. These test conditions are outlined below.

3.1.5.1.1 Life Cycle Tests-In the Sequence As Listed Below

3.1.5.1.1.1 Twenty eight Day Temperature and Humidity, per MIL-STD-2105B at $+160^{\circ}\text{F}$ at 95% R.H. and at -65°F , Wirebound box of 2 M2A1 cans and individual M2A1 cans.

3.1.5.1.1.2 Vibration (Transportation and Shipboard), per MIL-STD 2105B and MIL-STD-810E, "Category 1 for Transportation and Category 9 for Shipboard", $+160^{\circ}\text{F}$ and -65°F , Wirebound box of 2 M2A1 cans and individual M2A1 cans.

3.1.5.1.1.3 Four Day Temperature and Humidity, per MIL-STD-2105B at $+160^{\circ}\text{F}$ at 95% R.H. and at -65°F , Wirebound box of 2 M2A1 cans and individual M2A1 cans.

3.1.5.1.1.4 Leakage (Immersion) per MIL-STD-810E, Method 512.3, Section 1, Procedure I. /individual cartridges.

3.1.5.1.1.5 Forty Foot Drop, MIL-STD-2105B and MIL-STD-331B, $+70^{\circ}\text{F}$, Wirebound box of 2 M2A1cans and individual M2A1 cans.

3.1.5.1.2 Safety Tests.

3.1.5.1.2.1 Five Foot Drop, per MIL-STD-331B, Test A4 at $+70^{\circ}\text{F}$, $+125^{\circ}\text{F}$ and -40°F , Individual cartridges.

3.1.5.1.2.2 Rough Handling, per MIL-STD-331B, Test A5 at -65°F and $+160^{\circ}\text{F}$, Wirebound box of 2 M2A1 cans.

3.1.5.1.3 Environmental Tests.

3.1.5.1.3.1 High Temperature, per MIL-STD-810E, Method 501.3, Procedure I, Climatic category Hot, Induced conditions, per Table 501.3, Wirebound box of 2 M2A1 cans.

3.1.5.1.3.2 Low Temperature, per MIL-STD-810E, Method 502.3, Procedure I, Climatic region cold (C1), Induced conditions, per Table 502.3-I, Wirebound box of 2 M2A1 cans.

3.1.5.1.3.3 Temperature Shock, per MIL-STD-810E, Method 503.3-I, High temperature $+145^{\circ}\text{F}$, Low temperature -65°F , Wirebound box of 2 M2A1 cans.

3.1.5.1.3.4 Humidity, per MIL-STD-810E, Method 507.3, Procedure I, Humidity shall be

hot-Humid (cycle 1), per Table 507.3-I, 22 individual cartridges.

3.1.5.1.3.5 Humidity, per MIL-STD-810E, Method 507.3, Procedure II, Humidity shall be Hot-Humid (cycle 1), per Table 507.3-I, 22 Individual cartridges.

3.1.6 Contractor Performed Lot Acceptance Testing.

3.1.6.1. Test Plans for lot acceptance testing shall be identified and provided to the Government for approval prior to commencing such tests in accordance with CDRL A008.

3.1.6.1.3 Test equipment calibration procedures for lot acceptance shall be submitted to the Government for approval in accordance with CDRL A009 prior to performing any testing.

3.2. Components.

3.2.1. Cartridge Case. The cartridge case design utilized shall be determined by the contractor to meet performance requirements. Dimensioning and tolerancing shall be in compliance with ANSI Y14.5. The Rubber Ball cartridges shall be legibly marked with lot number and '40mm Rubber Ball, Non-Lethal' on the side length wise of the cartridge case. The Foam Rubber Baton cartridges shall be legibly marked with lot number and '40MM Foam Rubber Baton', Non-Lethal on the side lengthwise of the cartridge. The contractor shall certify that all cartridges function (Load, Fire and Extract) in the M203 Grenade Launcher, Design and Fabricate a Chamber Gage for this cartridge(s) and assign it a Calibration Fixture number. The Government shall examine and approve the Chamber Gage drawing(s) and fixture(s) prior to their use. 100% proofing of all cartridge cases, in a Chamber Gage is required.

3.2.1.1 The wadding used to seal the propellant and the cartridge itself shall provide a water-tight as well as air-tight seal. Wadding shall not damage the bore.

3.2.2 Energetic components shall be Navy Qualified Formulations as given in SW010-AD-GTP-010.

3.2.2.1. Propellant. (C1) Each cartridge shall contain smokeless propellant. The cartridge shall not utilize black-powder. The propellant selection and nominal charge weight shall be established by the manufacturer to meet performance requirements.

3.2.2.2 Primer. The primer shall be selected by the contractor to meet performance requirements.

3.2.2.3. Primed Case Sensitivity.

3.2.2.3.1. Primed case sensitivity shall meet the requirements as given in MIL-P-46610 paragraph "3.2 Sensitivity" for the respective primed case part number being considered for use in this cartridge. Refer to Appendix D for complete information on Primer Case Sensitivity.

- a. (C2) The mean critical height minus two standard deviations ($H_{\text{bar}} - 2s$), shall be as the given minimum.

- b. (M101) The mean critical height plus five standard deviations ($H_{bar} + 5s$), shall be as the given maximum.

3.2.2.3.2 If a shot shell primer is used in the 40mm cartridge, primed case sensitivity shall be as follows:

- a. (C2) The energy imparted by a steel ball falling, falling 2 inches onto the firing pin shall not cause initiation of the primer.
- b. (M101) The energy imparted by a steel ball falling, falling 12 inches onto the firing pin shall cause initiation of the primer.

Refer to Appendix D for complete information on Primer Case Sensitivity.

3.2.2.3.3 Manufacturers test data of Primed Case Sensitivity may be substituted in lieu of data developed by cartridge manufacturer.

3.2.3. Projectiles.

3.2.3.1 Rubber Ball. The cartridge shall contain a minimum of twenty-two each 0.60 caliber rubber ball projectiles in a cartridge case. Each rubber ball shall weigh 34 ± 5 grains. The hardness of each rubber ball shall be 60 ± 10 on the Durometer A scale per ASTM D2240. The projectile material and wadding shall not in any way damage the bore of the weapon.

3.2.3.2. Foam Rubber Baton. The cartridge shall contain three cylindrical shaped foam rubber batons in a cartridge case. Each foam rubber baton shall not weigh less than 250 grains or more than 280 grains. The hardness of each foam rubber baton shall be 25 ± 10 on the Durometer A scale per ASTM D2240. The projectile material and wadding shall not in any way damage the bore of the weapon.

3.3. Complete Cartridge.

3.3.1. Chambering. (M102) 100% proofing of all Cartridge Cases in a contractor provided Chamber Gage is required (See Paragraph 3.2.1. There shall be no failures of the cartridge to chamber in the chamber gage.

3.3.2. Primer Seating Depth. The primer seating depth shall be (M103) [flush to 0.011 inches (0.0279 cm) below flush] of the face of the cartridge case head.

3.3.3. Cartridge Overall Length. (M104) The overall length of the assembled cartridge shall not exceed that which will prevent chambering of the cartridge in the M203 grenade launcher. The overall length shall be established by the contractor to meet performance requirements. The tolerance maintained on the overall length shall be determined by the contractor to meet ballistic requirements. Dimensioning and tolerancing shall be in compliance with ANSI Y14.5.

3.3.4. The cartridge shall be assembled with an end wad. The end wad of the Rubber Ball

Cartridge shall have a raised letter "B" to allow identification in low light conditions. The end wad of the Foam Rubber Baton Cartridge shall have a raised letter "F" to allow identification in low light conditions. The letters shall be raised approximately 1/16 inch from the outer surface and shall be 3/4 inch wide and 3/4 inch long. Wadding shall not damage the bore.

3.4. Contractor Conducted Cartridge Acceptance Ballistics Test Requirements

3.4.1. Rubber Ball.

3.4.1.1. Velocity. All testing shall be performed simultaneous with function and casualty tests 3.4.1.3 and in accordance with Appendix A. The average velocity of the projectile shall be 325 feet per second (ft/s) plus or minus 35 ft/s when measured at a nominal distance of 3 feet from the test weapon muzzle, at test temperatures of $+70^{\circ} \pm 5^{\circ} \text{ F}$, $+120^{\circ} +5/-0^{\circ} \text{ F}$ and $0^{\circ} + 0/-5^{\circ} \text{ F}$. The maximum individual velocity shall not be greater than 450 ft/s. Individual cartridge muzzle velocity is defined as the muzzle velocity of the first (single) ball that triggers the input device. The average muzzle velocity for all tests is defined as the sum of the individual cartridge muzzle velocities divided by the total number of cartridges at all test temperatures.

3.4.1.2. Accuracy. All tests shall be performed at a temperature of $+70^{\circ} \pm 5^{\circ} \text{ F}$ in accordance with Appendix B. For each cartridge, at least 18 of the rubber balls, shall hit a 6 foot high by 9 foot wide target at a range of 50 feet from the muzzle of the test weapon.

3.4.1.3. Function and Casualty. Function and Casualty tests shall be conducted simultaneous with velocity tests 3.4.1.1 and in accordance with Appendix C. (M105) [there shall be no weapons stoppages due to the cartridges. Failure to chamber or to extract the cartridge constitutes a weapon stoppage.] Misfires shall be considered separately in accordance with Table I.

3.4.2. Foam Rubber Baton.

3.4.2.1. Velocity. All testing shall be performed simultaneous with function and casualty tests 3.4.2.3 and in accordance with Appendix A. The velocity of the projectile shall be 325 feet per second (ft/s) plus or minus 35 ft/s when measured at a nominal distance of 3 feet from the test weapon muzzle, at test temperatures of $+70^{\circ} \pm 5^{\circ} \text{ F}$, $+120^{\circ} +5/-0^{\circ} \text{ F}$ and $0^{\circ} + 0/-5^{\circ} \text{ F}$. The maximum individual velocity shall not be greater than 450 ft/s. Individual cartridge muzzle velocity is defined as the muzzle velocity of the first (single) baton that triggers the input device. The average muzzle velocity is defined as the sum of the individual cartridge muzzle velocities divided by the total number of cartridges at all test temperatures.

3.4.2.2. Accuracy. All testing shall be performed at a temperature of $70^{\circ} \pm 5^{\circ} \text{ F}$ in accordance with Appendix B. All sample cartridges shall have their projectiles (all foam rubber batons) hit a 6-foot high by 6-foot wide target (area 1 and area 2) at a range of 50 feet from the muzzle of the test weapon. All cartridges shall have at least two foam rubber batons per cartridge hit the center 3 feet by 6 feet target area (area 1). The projectiles shall hit the target without hitting the ground to be counted as a valid hit. See Figure 1 for accuracy target illustration.

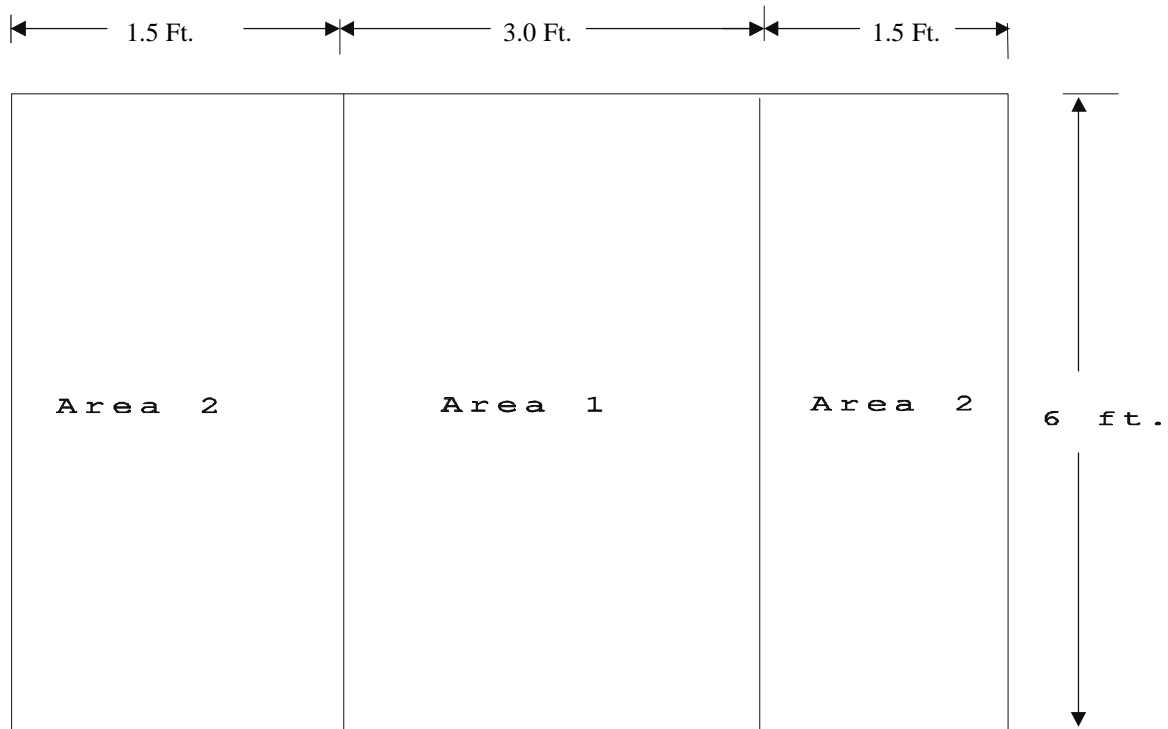


FIGURE 1 – ACCURACY TARGET



3.4.2.3. Function and Casualty. All testing shall be performed simultaneous with velocity tests 3.4.2.1 and in accordance with Appendix C. (M105) [There shall be no weapons stoppages due to the cartridges.] All test Misfires shall be considered separately in accordance with Table 1.

3.5. Workmanship. All parts, assemblies, and complete cartridge shall be fabricated, constructed, and assembled in a thorough and workmanlike manner to requirements specified in paragraphs 3.2 and 3.3. Components and the completed cartridge shall be free from folds, wrinkles, deep draw scratches, scaly metal, dents, burrs, cracks, holes, voids and other defects. All components and the completed cartridge shall be free of foreign material including, but not limited to, corrosion, stains, dirt, oil grease, and smears of lacquer and metal chips.

TABLE I
BALLISTIC FUNCTION AND SAFETY¹

CHARACTERISTICS ²	CLASS	ACCEPT	REJECT
1. There shall be no hang fires.	(C3)	0	1
2. There shall be no misfires. ³	(M106)	N ³	N ³
3. A projectile or portion thereof shall not remain in the bore.	(C4)	0	1
4. There shall be no gas leakage or primer failures due to:			
a. Perforation in firing pin	Minor	3	4
b. Escape of gas through primer cup other than 4.a.	Minor	3	4
c. Escape of gas around primer cup. ⁴	Minor	3	4
d. Loose primer.	(M107)	1	2
e. Blown primer.	(C5)	0	1
5. There shall be no gas leakage around the base plug. ⁵	Minor	3	4
6. There shall be no cartridge case casualties due to: ⁶			
a. Longitudinal split of the:			
1). Mouth	(M108)	1	2
2). Body	(C6)	0	1
3). To Head	(C7)	0	1
b. Circumferential Rupture: ⁷			
1). Partial, Body (K)	(M109)	1	2
2). Partial, Head (L)	(C8)	0	1
3). Complete	(C9)	0	1
7. There shall be no fragments generated by the functioning of the projectile that endanger the shooter.	(C10)	0	1

¹ The occurrence of one or more critical defects attributable to the cartridge during any test, including warm and foul firings of cartridges from the test lot, shall result in rejection of the lot.

² For definition of characteristics see 7.3.

³ Each cartridge that misfires shall be disassembled and examined to determine the cause of the misfire.

a. If the misfire is attributed to a defective cartridge (for other than a critical defect) due to improper assembly, missing components, insensitivity, etc., then the criteria for acceptance/rejection of major characteristic shall be accept on 0, reject on 2 defective. If one misfire occurs, then a second Function and Casualty sample of a quantity required by inspection level V in Table III for the size of the lot sampled shall be tested in accordance with 4.3.2.3 and Appendix C. The occurrence of any additional misfires shall result in rejection of the lot (accept on 1, reject on 2 defective for the cumulative total of all firings). Additionally, the occurrence of one or more critical defects during the firing of any test, including the second Function and Casualty sample, shall result in rejection of the lot.

b. The lot shall be rejected if the cartridge does not meet the critical requirement paragraph 3.2.2.1 (type of propellant charge).

c. If the misfire is attributed to the test weapon, then the weapon shall be repaired or replaced and another cartridge fired in place of the misfire.

⁴ Gas escape around more than 50 percent of the periphery of the primer cup.

⁵ Gas escape around more than 50 percent of the periphery of the base plug.

⁶ The mouth area of the cartridge case descends downward from the opening for 25% of the overall length of the cartridge case. The head are of the cartridge case ascends upward from the base of the cartridge case for 25% of the overall length of the cartridge case. The area of the cartridge case that is not part of the head or the mouth areas is the cartridge case body.

⁷ Reference drawing 19200-7643674 for defect characteristics

4.0. Quality Assurance Provisions

4.1 Responsibility For Inspection. Unless otherwise specified herein, in the contract or in the purchase order, the supplier is responsible for the performance of all inspection and test requirements as specified herein. Except as otherwise specified, the supplier may utilize his own facilities or any commercial facility acceptable to the Government. The government reserves the right to perform any of the inspections and tests set forth in this specification where such inspections and tests are deemed necessary to ensure that supplies and services conform to prescribed requirements. Unless otherwise specified herein the contract or in the purchase order, all test and inspection equipment (including barrels and test weapons) shall be supplied and maintained by the contractor in accordance with ISO-9001.

4.1.1. Responsibility for Compliance. The inspections set forth in this specification shall become a part of the contractor's overall inspection system or quality program. The absence of any inspection requirements in the specification shall not relieve the contractor of the responsibility of ensuring that all products or supplies submitted to the Government for acceptance comply with all requirements of the contract. Sampling inspection, as part of manufacturing operations is an acceptable practice to ascertain performance to requirements, however, this does not authorize submission of known defective material, either indicated or actual, nor does it commit the Government to accept defective material. Failures shall be examined for causes (when prudent to do so) and corrective measures implemented.

4.1.2. Quality Assurance Terms and Definitions. Reference shall be made to ANSI/ASQC A8402-1994 for definitions of quality assurance terms.

4.1.3. Lot Formation. The cartridges shall be assembled into identifiable lots. Each lot shall consist of units of product of a single type, grade, class, size, and composition, manufactured under the same conditions, by the same manufacturer, and at the same time in order to meet the homogeneous, interfix requirements of MIL-STD-1168, Paragraph 3.11. Lot size shall be 5,016 cartridges minimum and 11,000 cartridges maximum. Each lot shall be assigned a lot number in accordance with MIL-STD-1168. Only one type and weight of propellant shall be used in a lot of cartridges. Each lot shall contain no more than one lot of primers, one lot of propellant, one lot of cartridge cases, one lot of projectiles and one lot of end wads. Cartridge quantities in the final lot delivery against the contract shall be adjusted to reflect the requirements. An Ammunition Data Card, per paragraph 3.1.4.2, shall be submitted with each lot. Partial lot shipments will not be accepted.

4.2 Inspection Provisions. Unless otherwise specified herein, the contract or purchase order, Tables II and III shall be used for nondestructive acceptance inspection. Inspection shall be by characteristic. Acceptance criteria shall be accepted on zero defects and rejected on one or more defects for all inspection levels. Number under "Inspections Levels" indicates sample size. Asterisk indicates one hundred percent inspection. If sample size exceeds lot size, perform one hundred percent inspection. One hundred percent inspection shall be used for all critical characteristics and, whenever possible, utilize non-operator dependent test equipment. The contractor shall provide a manufacturing and inspection system reliability which assures no more than one in a million items contain the critical defect. System reliability shall be as defined by MIL-A-48078. Unless otherwise specified, inspection level V shall be used for major characteristics and inspection level VII for minor characteristics. Section 3 and 5 requirements that are not annotated as critical or major shall be classified as minor. Unless otherwise specified, each lot of components and each lot of cartridges shall be inspected in accordance with 4.2.1. through 4.3.2.3. as applicable. Classification of characteristics shall be defined in accordance with DOD-STD-2101. Alternative conformance inspections may be submitted and approved in accordance with MIL-STD-1916.

TABLE II
INSPECTION LEVEL

<u>Referenced AQL</u>	<u>Inspection Level</u>
0.040	I
0.065	II
0.100	III
0.150	IV
0.250	V
0.400	VI
0.650	VII
1.000	VIII
1.500	IX
2.500	X
4.000	XI
6.500	XII

TABLE III
SAMPLING

Lot Size	Inspection Levels											
	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
2 - 8	*	*	*	*	*	*	*	*	*	5	3	2
9 - 15	*	*	*	*	*	*	*	13	8	5	3	2
18 - 25	*	*	*	*	*	*	20	13	8	5	3	2
26 - 50	*	*	*	*	*	32	20	13	8	5	4	3
51 - 90	*	*	*	80	50	32	20	20	20	13	8	6
91 - 150	*	*	125	80	50	32	20	20	20	13	10	8
151 - 280	*	200	125	80	50	32	32	32	20	15	13	9
281 - 500	315	200	125	80	50	50	49	33	24	19	14	11
501 - 1200	315	299	200	125	80	74	49	39	31	23	18	14
1201 - 3200	315	299	200	169	129	96	59	49	36	28	22	17
3201 - 10000	315	299	200	169	149	124	74	56	45	35	27	19
10001 - 35000	498	315	299	229	199	142	99	72	56	43	31	19

4.2.1. Workmanship. Cartridges and components shall be visually inspected to determine compliance with the requirements of 3.2.1, 3.3.4 and 3.5.

4.2.2. Packaging, Packing, Palletizing and Marking. During or immediately prior to the packaging operation, 100% examination of the cartridges shall be performed to ascertain that the cartridge type conforms to the requirements of 3.5. All non-conforming cartridges shall be rejected. Inspection of packaging, packing, palletizing and marking shall be in accordance with MIL-STD-644A.

4.2.3. Dimensional/Weight Verifications. Dimensional and weight requirements as specified in paragraphs 3.2.1 through 3.2.3. and 3.3.1. through 3.3.4 shall be verified by contractor gages or by Standard Measuring Instruments (SMI). Alternative inspection procedures such as SPC may be used when these provide the same level of quality assurance. Approval by Government will be required prior to implementation of these alternatives.

4.2.4. Automatic/Visual Inspection. The contractor shall verify the presence of primer pocket

vent hole by 100% visual inspection or by non-operator dependent automated equipment and the presence of a propellant charge by visual inspection or by automated equipment using probes or other sensing devices.

4.2.5. Certifications. Certificate of Compliance shall be provided to the Government for each lot of ammunition in accordance with Appendix E and CDRL A010.

4.3. Test Provisions. Unless otherwise specified, each lot of components and each lot of cartridges shall be tested in accordance with 4.3.1., 4.3.2. and Table IV as applicable. Unless otherwise specified, all testing shall be conducted with samples conditioned at $70^{\circ} \pm 5^{\circ}$ F for a minimum of two hours. Cartridges shall be randomly selected in such a manner that the sample is representative of the lot. The cartridges shall be thoroughly mixed before being divided into sample groups for each test. If an equipment/weapon failure occurs which prevents the obtaining of a reliable test result, then the equipment/weapon shall be replaced or repaired; the individual test cartridge result shall be disregarded and another sample cartridge shall be fired for record. If the equipment/weapon failure prevented the obtaining of reliable results for the entire test series, then the entire test result shall be disregarded and a complete sample shall be fired for record. If a firing defect occurs which is not attributable to the test conditions, and which prevents obtaining a reliable result for the test, an additional cartridge shall be fired in its place; the test shall not be penalized, but the defect shall be counted in the cumulative ballistics sample for Table I.

4.3.1. Component/Subassembly Tests.

4.3.1.1. Primed Case Sensitivity.

4.3.1.1.1 Unless otherwise substantiated that the requirements in paragraph 3.2.2.3 are met, primed case sensitivity testing shall be completed and the requirements in paragraph 3.2.2.3 shall be met. The contractor shall submit substantiating documentation to and receive approval from the contracting officer for each primer lot that will not be subjected to primer sensitivity testing.

4.3.1.1.2. The complete sensitivity rundown test shall be conducted on each lot of primers, in accordance with Appendix D. Fifty (50) empty primed cases shall be tested at each one-inch increment of height between 0% and 100% firing. The total sample size shall be adjusted accordingly to meet Table III requirements. Primed case lots, which do not meet the requirements of 3.2.2.3.1 shall be rejected.

4.3.1.1.3. If a shot shell primer is used in the 40mm cartridge, the test shall be conducted using either empty primed shot shell hulls held in steel dies or primer assemblies (primer cup, anvil, and battery cup) held in steel dies. The sample of 300 empty primed shot shell hulls (or primer assemblies) shall be tested for primer sensitivity in accordance with Appendix D. Two hundred shot shell hulls (or primer assemblies) shall be tested at a height of 12 inches and one hundred shot shell hulls (or primer assemblies) shall be tested at a height of 2 inches. If one or more primed shot shell hulls (or primer assemblies) fail at either height, the sample fails and a sensitivity rundown test shall be conducted. The sensitivity rundown test shall consist of 50 empty primed shot shell hulls (or primer assemblies) tested at each one-inch increment of height between 0% and 100% firing. If the average critical height (H) plus four standard

deviations (4 sigma) exceeds 14 inches, or if the average critical height (H) minus 2 standard deviations (2 sigma) is less than 1 inch, the lot of cartridges shall be rejected. The average critical height (H) is defined as the mean height at which 50% of the primers being tested will fire.

TABLE IV
TEST REQUIREMENTS

Tests	Temperature Conditioning Range And Sampling Size					Test	Requirement
			0°F +0/-5 °F	70°F +/-5°F	120°F +5/-0 °F		
Component/ Subassembly							
1. Primed Case Sensitivity				N ¹		4.3.1.1	3.2.4
Cartridge Ballistic Tests ^{2,3}							
2. Velocity			44	110	44	4.3.2.1	3.4.1.1 & 3.4.2.1
3. Accuracy				198		4.3.2.2	3.4.1.2 & 3.4.2.2
4. Function & Casualty			44	110	44	4.3.2.3	3.4.1.3 & 3.4.2.3

¹ See paragraph 4.3.1.1.

² The results of all ballistics tests, including examination of misfired cartridges and fired cartridge cases and primers, shall be used to determine compliance with the requirements of Table I. The occurrence of any critical defects attributable to the cartridges (including firings of warm and foul cartridges from the test lot) shall result in rejection of the lot and no further testing shall be conducted.

³ Function and casualty tests shall be conducted simultaneous with velocity tests. If the firing of a second Function and Casualty sample is required due to the occurrence of a misfire as specified by Table I, the second sample shall be in accordance with Table III, level V inspection and the lot size being sampled. Cartridges shall be fired in accordance with the Function and Casualty test procedure. This second sample shall be tested only for misfires and critical defective for acceptance/rejection.

4.3.2. Cartridge Acceptance Ballistic Tests.

4.3.2.1. Velocity. The velocity tests shall be conducted simultaneous with function and casualty tests 4.3.2.3 and in accordance with Appendix A. The lot shall be rejected if the average velocity of the projectiles at all test temperature does not meet the requirements of 3.4.1.1 for Rubber Ball Cartridges and 3.4.2.1 for Foam Rubber Baton Cartridges. Velocities shall be

recorded for certification purposes at $+70^{\circ} \pm 5^{\circ}$ F, $+120^{\circ} +5/-0^{\circ}$ F and at $0^{\circ} +0/-5^{\circ}$ F. An outlier shall be permitted up to ± 25 percent of the mean velocity of the lot. No more than one value on the high side and not more than one value on the low side shall be omitted from the mean velocity calculation. If a velocity value is greater than ± 25 percent of the mean velocity of the lot, the lot shall be rejected.

4.3.2.2. Accuracy. The accuracy test shall be conducted in accordance with Appendix B. The requirements of 3.4.1.2 for Rubber Ball Cartridges and 3.4.2.2 for Foam Rubber Baton Cartridges shall be met. The lot shall be rejected if these accuracy requirements are not met.

4.3.2.3. Function And Casualty. The function and casualty test shall be conducted simultaneous with velocity tests 4.3.2.1 and in accordance with Appendix C. The requirements of 3.4.1.3 for Rubber Ball Cartridges, and 3.4.2.3, for Foam Rubber Baton Cartridges shall be met. Acceptance/rejection shall be as shown in Table V below.

TABLE V
FUNCTION TEST AC/RE CRITERIA

<u>Type of Stoppage</u>	<u>Type of Weapon</u>	<u># of Stoppages Accept/Reject</u>
Failure to Chamber	M203	0/1
Failure to Extract	M203	0/1
All other Stoppages	M203	0/1

5.0 DATA DELIVERABLES.

<u>SOW PARA</u>	<u>SEQ NO.</u>	<u>DATA DESCRIPTION</u>	<u>DID NO.</u>
3.1.3	A001	Configuration Management Plan	DI-CMAN-80858A
3.1.3.1	A002	Engineering Change Proposal	DI-CMAN-80639B
3.1.3.1	A003	Request for Deviation	DI-CMAN-80640B
3.1.3.1	A004	Request for Waiver	DI-CMAN-80641B
3.1.3.2	A005	Technical Data for Munitions (TDM)	DI-SAFT-80182B
3.1.4.1	A006	Ammunition Data Card	DI-MISC-80043A
3.1.4.2	A007	Ammunition Data Card	DI-MISC-80043A
3.1.6.1	A008	Test Plan	DI-NDTI-80566
3.1.6.1.1	A009	Special Inspection Equipment Calibration Procedures	DI-QCIC-81007

4.2.5 A010 Certification/Data Report DI-MISC-80678

6.0 SPECIAL CONSIDERATIONS.

6.1 Place of Performance. All work shall be performed at Contractor's facility or other Government approved facility.

6.2 Inspections and Acceptance. Inspection shall be performed at source by the contractor or by a Government approved subcontractor with acceptance at source in accordance with ISO 9001.

7.0 NOTES

7.1 Packaging. For acquisition purposes, the packaging requirements shall be specified in the contract or order. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's System Command. Packaging data retrieval is available from the managing Military Department or Defense Agency's automated packaging files, CD-ROM products, or by contacting the responsible packaging activity.

7.2 Acquisition requirements. Acquisition documents must specify the following:

- a. Title, number and date of the specification.
- b. Issue of DoDISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1).
- c. Packaging requirements shall meet Level "A" requirements of MIL-STD-2073. There are to be 22 cartridges packed in a M2A1 Can and two (2) M2A1 Cans per one wirebound box (MIL-B-46506B).

7.3 Definitions.

- a. Misfire: Failure of a cartridge to fire after the initiating impulse has been applied to the primer, normally due to:
 - (1) The primer fails to fire when struck by the firing pin.
 - (2) The propellant does not ignite when the primer fires.
- b. Hang fire: Any perceptible delay in the functioning of a cartridge after the initiating impulse has been applied to the primer.
- c. Blown primer: A blown primer is a primer which, when the cartridge is fired, is separated completely from the head of the cartridge case, and both the head of the case and primer pocket are enlarged and deformed.

- d. Longitudinal split: A longitudinal separation of the material in the cartridge case wall produced by firing.
- e. Circumferential rupture: A circumferential separation of the cartridge case wall produced by firing. A partial rupture is one, which extends less than 360 degrees around the case. A complete rupture is one, which extends entirely around the case, separating the case into two parts.
- f. Premature cartridge function: A premature function of the cartridge prior to intentional initiation of the firing mechanism of the weapon. Such failures usually occur during cycling of the weapon mechanism and prior to complete locking of the weapon's bolt.
- g. Loose primer: Independent movement of primer in cartridge case primer pocket or primer falls out of pocket.

APPENDIX A

A. Velocity Test Procedure for Each Cartridge Type

A.1 Scope. The velocity test shall be performed to determine the velocity level and uniformity of the cartridges. For the rubber ball cartridge, the test will measure the velocity of only one rubber ball (out of a minimum of twenty-two balls) that will trigger the input device. For the foam rubber baton cartridge, the test will measure the velocity of only one foam rubber baton (out of three batons) that will trigger the input device. Velocity tests shall be conducted simultaneous with function and casualty tests to minimize total samples required.

A.2 Equipment.

A.2.1 Weapons. Test weapons shall be four M203 Grenade Launchers (NSN 1010-00-179-6447). No alterations to the test weapons, beyond the requirements and specification of the original manufacturer or supplier, shall be permitted. The bore diameter of each weapon shall be measured and recorded.

A.2.2 Weapon Mount. Each test weapon shall be supported during testing by mounting in suitable fixtures as required to permit manual operation of the test barrel or weapon. The test fixtures shall be constructed and mounted so as to prevent fixture movement during testing.

A.2.3 Measuring equipment. Equipment shall be utilized to measure the time of flight of the projectile. This equipment shall consist of an electronic counter or chronograph and input devices, such as photoelectric screens, to provide start and stop signals to the counter as the projectile passes. The input devices shall be placed at 1.5 feet and 4.5 feet from the muzzle of the test barrel, so that a velocity measuring distance of 3 feet from the muzzle of the test barrel can be obtained. This equipment, including accurate placement of the input devices (screens), shall provide a minimum accuracy of plus or minus 3.5 ft/sec in velocity readings. Doppler Radar Chronograph equipment may also be used to measure velocity. Minimum accuracy of plus or minus 3.5 ft/sec also apply to Doppler systems.

A.3 Test Procedure.

A.3.1 Weapon Preparation. The chamber and bore of the test weapon shall be thoroughly cleaned and wiped dry prior to firing, and shall be cleaned after firing each group of rounds for record.

A.3.2 Cartridge Conditioning. The required number of test cartridges shall be placed in the temperature controlled room or container in such a manner that all cartridges are subjected to an uniform temperature for a minimum of two hours prior to firing. Test cartridges shall be placed in a vertical position, primer-end down. The container or room shall be maintained at $70^{\circ}\pm 5^{\circ}\text{F}$, $120^{\circ}\pm 5^{\circ}\text{F}$ and $0^{\circ}\pm 0^{\circ}\text{F}$, and be of sufficient capacity to allow free circulation of air.

A.3.3 Firing.

A.3.3.1 Two (2) warmer (fouling) shots shall be fired after each cleaning of the test weapon. During warm and foul, velocity shall be measured, but the readings shall not be included in the record of the sample.

A.3.3.2 All cartridges shall be singly loaded into the chamber of the test weapon. The cartridges shall be removed singly from the controlled-temperature room or container immediately before firing. If any delay should occur after the cartridge is placed in the chamber, and the duration of the delay is approximately 1 minute or longer, that cartridge shall be extracted and another inserted in its place.

A.3.3.3 The cartridge shall be chambered very carefully.

A.3.3.4 The cartridge shall be fired.

A.3.3.5 The procedures prescribed in A.3.3.2 through A.3.3.4 shall be repeated until a sample quantity of 110 from the lot being sampled have been conditioned at $70^{\circ} \pm 5^{\circ}$ F for two (2) hours minimum prior to test and fired nearly equal from four weapons. Record data for inclusion in average velocity calculations and certification purposes.

A.3.3.6 Repeat the procedures prescribed in A.3.3.2 through A.3.3.5 with the exception that 44 test cartridges shall be conditioned at $120^{\circ} + 5/-0^{\circ}$ F for two hours minimum prior to test and fired equally from four weapons. Record data for average velocity calculations and certification purposes.

A.3.3.7 Repeat the procedures prescribed in A.3.3.2 through A.3.3.5 with the exception that 44 test cartridges shall be conditioned at $0^{\circ} + 0/-5^{\circ}$ F for two hours minimum prior to test and fired equally from four weapons. Record data for average velocity calculations and certification purposes.

A.3.3.8 The temperature of the test barrel should be controlled so that the exposed metal surface of the barrel does not become too hot to grasp with the bare hands (approximately 140° F). If the barrel becomes too hot to use, it shall be cooled to ambient temperature before the test is continued. The chamber and bore shall be cleaned and wiped dry and the warming and fouling cartridges shall again be fired prior to continuation of the test.

A.3.3.9 Misfired cartridges and fired cartridge cases and primers shall be retained for further examination.

A.4 Examinations. All fired cartridge cases and primers shall be visually examined to determine compliance with the applicable requirements of Table I. In the event that fired case or primer defects are encountered, or if a misfire(s) occurs, then the test weapon shall be examined to determine if the defect(s) are attributable to the weapon. If the weapon is at fault, then the test shall be disregarded and the weapon shall be repaired or replaced prior to performing a retest. If the defect cannot be attributed to the weapon, then the defect shall be attributed to the cartridges. Misfired cartridges shall be disassembled to determine the cause of the misfire.

A.5 If velocity test weapon is supplied as Government Furnished Equipment in accordance with the requirements of the contract or purchase order, and then the contractor shall maintain detailed records (log books) of all cartridges fired through the weapon. These records shall include type of ammunition, lot number, date of firing, personnel conducting the firing, brief summary of firing results, and any unusual occurrence or parts breakage. The log book record shall also include notations each time the weapon is cleaned, when parts are replaced, results of inspections, etc. The log book record shall remain with each weapon throughout the course of the contract and shall be returned to the Government with the weapon when the contract is completed (in accordance with the terms of the contract and ISO 9001).

APPENDIX B

B. Accuracy Test Procedure for Each Cartridge Type

B.1 Scope. The accuracy test shall be performed to determine the uniformity and dispersion of the cartridges at a specified distance from the test weapon.

B.2 Equipment.

B.2.1 Range. The firing range shall be arranged such that a horizontal distance of 50.0 ± 1.0 foot is maintained from the muzzle of the test weapon to the face of the test targets.

B.2.2 Weapons. Test weapons shall be four M203 Grenade Launcher (NSN 1010-00-179-6447). No alterations to the test weapons, beyond the requirements and specification of the original manufacturer or supplier, shall be permitted. The bore diameter of each weapon shall be measured and recorded.

B.2.3 Weapon Mount. Each weapon shall be supported during testing by mounting in suitable fixtures as required to permit manual operation of the test weapon. The test fixtures shall be constructed and mounted so as to prevent fixture movement during testing.

B.2.4 Targets. All test targets shall be rigidly mounted at a distance of 50.0 ± 1.0 foot from the muzzle of the test weapon. The target material will be such as to allow the projectile impact location to be clearly identifiable (thick paper advisory).

B.3 Test Procedure.

B.3.1 Weapon Preparation. The chamber and bore of the test weapon shall be thoroughly cleaned and wiped dry prior to firing, and shall be cleaned after firing each group of rounds for record.

B.3.2 Cartridge Conditioning. The required number of test cartridges shall be placed in the temperature controlled room or container in such a manner that all cartridges are subjected to an uniform temperature for a minimum of two hours prior to firing. Test cartridges shall be placed in a vertical position, primer-end down. The container or room shall be maintained at $70^{\circ} \pm 5^{\circ} \text{F}$ and be of sufficient capacity to allow free circulation of air.

B.3.3 Firing.

B.3.3.1 A minimum of three unrecorded cartridges of the type of ammunition under test shall be fired to assure that the test weapon is correctly sighted on the target, to warm and foul the weapon, and to settle the weapon in the test fixtures.

B.3.3.2 After the warming and fouling cartridges have been fired, the target shall be changed so as to present a fresh surface for the succeeding rounds.

B.3.3.3 For accuracy testing, all cartridges shall be singly loaded into the chamber of the test weapon. The cartridges shall be removed singly from the controlled-temperature room or container immediately before firing.

B.3.3.4 Fire the cartridge.

B.3.3.5 The target shall be inspected for a hole(s) made by projectile(s). The hole(s) shall be marked. The target shall be changed, if necessary, so as to present a fresh surface for the succeeding rounds.

B.3.3.6 The procedures prescribed in B.3.3.2 through B.3.3.5 shall be repeated until a sample quantity of 198 from the lot being sampled have been conditioned at $70^{\circ} \pm 5^{\circ}$ F for two (2) hours minimum prior to test and fired nearly equal from four weapons . Record data for certification purposes.

B.3.3.7 The temperature of the test barrel should be controlled so that the exposed metal surface of the barrel does not become too hot to grasp with the bare hands (approximately 140° F). If the barrel becomes too hot to use, it shall be cooled to ambient temperature before the test is continued. The chamber and bore shall be cleaned and wiped dry and the warming and fouling cartridges shall again be fired prior to continuation of the test.

B.3.3.8 Misfired cartridges and fired cartridge cases and primers shall be retained for further examination.

B.4 Examinations. All fired cartridge cases and primers shall be visually examined to determine compliance with the applicable requirements of Table I. In the event that fired case or primer defects are encountered, or if a misfire(s) occurs, then the test weapon shall be examined to determine if the defect(s) are attributable to the weapon. If the weapon is at fault, then the test shall be disregarded and the weapon shall be repaired or replaced prior to performing a retest. If the defect cannot be attributed to the weapon, then the defect shall be attributed to the cartridges. Misfired cartridges shall be disassembled to determine the cause of the misfire.

B.5 If accuracy test weapons are supplied as Government Furnished Equipment in accordance with the requirements of the contract or purchase order, then the contractor shall maintain detailed records (log books) of all cartridges fired through each weapon. These records shall include type of ammunition, lot number, date of firing, personnel conducting the firing, brief summary of firing results, and any unusual occurrence or parts breakage. The log book record shall also include notations each time the weapon is cleaned, when parts are replaced, results of inspections, etc. The log book record shall remain with each weapon throughout the course of the contract and shall be returned to the Government with the weapon when the contract is completed (in accordance with the terms of the contract and ISO 9001).

APPENDIX C

C. FUNCTION AND CASUALTY TEST PROCEDURE for Each Cartridge Type

C.1 Scope. The purpose of the function and casualty test is to determine if the ammunition will perform and function satisfactorily in the weapons for which it has been designed. These tests will be performed simultaneous with velocity tests to maximize the use of test samples.

C.2 Equipment.

C.2.1 Test Weapons. Test weapons shall be four each M203 Grenade Launchers (NSN 1010-00-179-6447). No alterations to the test weapons, beyond the requirements and specification of the original manufacturer or supplier, shall be permitted. The bore diameter of each weapon shall be measured and recorded.

C.3 Test Procedure.

C.3.1 Cartridge Examination. If visual defects are found in the test cartridges prior to testing, the defective cartridge(s) shall be replaced. Table VI below shows the number of rounds to be fired at each temperature range.

TABLE VI
FUNCTION AND CASUALTY TEST

Test Weapon	Temperature Range		
	0° +0/-5°F	70°±5°F	125°+5/-0°F
M203 #1	11	28	11
M203 #2	11	27	11
M203#3	11	27	11
M203 #4	11	28	11
Total Rounds Each Range	44	110	44

C.3.2 Cartridge Conditioning. The required number of test cartridges shall be placed in the temperature controlled room or container in such a manner that all cartridges are subjected to an uniform temperature for a minimum of two hours prior to firing. The container or room shall be maintained at specified temperatures and be of sufficient capacity to allow free circulation of air.

C.3.3 Weapon Conditioning. Test weapons shall be thoroughly cleaned prior to the beginning of testing and before testing at each temperature range. The test weapons shall be cleaned and

lubricated in accordance with the appropriate weapon manual. The weapons shall be maintained at room temperature (55°F (12.8°C) minimum) for a minimum of two hours prior to the start of testing.

C.3.4 Firing. Test sequence shall be that specified under Appendix A for velocity testing for each test weapon.

C.3.4.1 The firing procedure for the M203 grenade launcher shall be as follows:

- a. With the safety in the safe position, press barrel release latch and slide barrel forward.
- b. Insert ammunition into chamber.
- c. Slide barrel closed until it locks (clicks).
- d. Place butt stock of weapon firmly against shoulder, move safety to fire position, takes aim, squeeze trigger to fire weapon.
- e. To remove cartridge, press barrel release latch and slide barrel forward to extract cartridge.
- f. Repeat until all required cartridges are expended.

C.3.4.2 The firing sequences of C.3.4.1 shall be repeated for each test weapon for each temperature range.

C.3.4.3 In the event of a weapon stoppage during the test, the test weapon shall be examined to determine if the stoppage is attributable to the weapon. If the weapon is at fault, then the test shall be disregarded and the weapon shall be repaired or replaced prior to performing a retest. If the stoppage cannot be attributed to the weapon, then the defect shall be attributed to the cartridges. In addition to weapon stoppages during firing, the following shall also be considered as weapons stoppages:

- a. Failure of any manually chambered cartridge to fully chamber in the barrel of the weapon.
- b. The cartridge being slipped passed the extractor of the weapon during chambering.

C.3.4.4 Misfired cartridges and fired cartridge cases shall be retained for further examination.

C.4 Examinations. All fired cartridge cases and primers shall be visually examined to determine compliance with the applicable requirements of Table I. In the event that fired case or primer defects are encountered or if a misfire(s) occurs, then the test weapon shall be examined to determine if the defect(s) are attributable to the weapon. If the weapon is at fault, then the test shall be disregarded and the weapon shall be repaired or replaced prior to performing a retest. If the defect cannot be attributed to the weapon, then the defect shall be attributed to the cartridges. Misfired cartridges shall be disassembled to determine the cause of the misfire.

C.5 If function and casualty weapons are supplied as Government Furnished Equipment in accordance with the requirements of the contract or purchase order, then the contractor shall maintain detailed records (log books) of all cartridges fired through each weapon. These records shall include type of ammunition, lot number, date of firing, personnel conducting the firing, brief summary of firing results, and any unusual occurrence or parts breakage. The log book record shall also include notations each time the weapon is cleaned, when parts are replaced, results of inspections, etc. The log book record shall remain with each weapon throughout the course of the contract and shall be returned to the Government with the weapon when the contract is completed (in accordance with the terms of the contract and ISO 9001).

APPENDIX D

D. PRIMED CASE SENSITIVITY for Each Cartridge Type

D.1 Scope. The primed case sensitivity test shall be performed to determine the sensitivity limits within which the primer functions in order to provide assurance that: 1) the primer will be safe to handle, and 2) the primer will fire in the cartridges case and weapon(s) for which it is intended.

D.2 Equipment.

D.2.1 The falling mass shall be a steel ball weighing 1.94 ± 0.02 ounces with an approximate diameter of 0.938 inches.

D.2.2 The radius of the firing pin tip shall be $.0500 \pm .0025$ inches. The firing pin shall have a nominal weight of 70 grains (0.160 ounces).

D.3 Test Procedure

D.3.1 Preparation for Test

D.3.1.1 This test shall be conducted on empty primed cases. In the event, the primed cases must be obtained by disassembly of cartridges; the disassembly shall be accomplished in such a manner as to cause the least possible distortion of the cartridge case.

D.3.1.2 The machine shall have a firing-pin protrusion of 0.058 inches minimum. This shall be measured by seating the firing pin fully against the shoulder stop in the firing-pin retainer, and measuring the resulting protrusion of the point of the firing pin from the face of the firing-pin retainer. A micrometer, dial indicator, or other suitable measuring instrument shall be used for this purpose. If the firing-pin protrusion is found to be less than the specified dimension, then the firing pin or the firing-pin retainer shall be replaced as necessary to achieve the required firing-pin protrusion.

D.3.1.3 A headspace gage having the appropriate dimensions shall be placed in the case holder. The case holder shall be lowered, if necessary, until the breech-block closes and clamps freely without interference with the headspace gage. The case holder shall then be adjusted by rising carefully until contact is felt between the head of the gage and the firing-pin retainer when the breech-block is fully closed. To verify that contact has been established between the headspace gage and the firing-pin retainer, the retainer shall be coated thinly with some colored compound (such as "Prussian blue" in oil), which will be transferred to the opposing surface upon contact. The breech-block shall be closed and clamped with the headspace gage in place; the breech-block shall then be opened, and the head of the gage inspected for evidence of contact, and adjustment of the case holder refined as necessary. When the proper adjustment has been achieved, the case holder shall be locked in position by tightening the locking collar, and the

adjustment shall be verified again using the colored compound and the headspace gage to assure that the adjustment has not been disturbed by tightening the locking collar. The gage shall then be removed from the case holder, and the face of the firing-pin retainer wiped clean.

D.3.1.4 A primed case shall be inserted in the case holder, and the breech block closed and clamped. The electromagnet shall be energized and the ball attached thereto. All measurements shall be made between the head of the firing pin and the bottom of the suspended ball. The method of measurement used for indicating height of drop shall be graduated in inches with an accuracy of ± 0.015 inch. The position of the magnet and ball shall be adjusted so that the height of drop desired can be accomplished. When this adjustment has been completed, the ball shall be removed from the machine.

D.3.1.5 It is suggested that a plumb bob be attached to the magnet and the machine adjusted so that the point of the plumb bob is above the center of the firing pin. The plumb bob shall be removed when this adjustment has been completed. To determine if the drop ball is obtaining central impacts on the firing pin, a small piece of carbon paper may be placed on the head of the firing pin and the ball dropped from various heights. After the ball is dropped each time, the firing pin head shall be inspected to ascertain if the mark left by the carbon paper is in the center of the head. If the ball is not hitting in the center of the head, the cause thereof shall be determined and corrective action taken.

D.4 TEST PROCEDURE (TWO HEIGHT TEST)

D.4.1 Preparation for test.

D.4.1.1 Preparation for test shall be as prescribed in D.3.1.

D.4.2 Conducting the test

D.4.2.1 Two sample quantities are selected, each containing the number of items prescribed in the applicable specification.

D.4.2.2 Current is applied to the magnet coil to the drop test machine and the magnet height is set so that the distance between bottom of suspended ball and top surface of firing-pin assembly, with primed case in position, is set for the lower height.

D.4.2.3 Alignment of magnet with firing pin is checked as prescribed in D.3.1.5.

D.4.2.4 Primed case is inserted in holder.

D.4.2.5 Breech- block is closed and locked.

D.4.2.6 Steel ball of appropriate size is suspended from magnet.

D.4.2.7 Key is pressed to break circuit and permit ball to fall.

D.4.2.8 Performance of primer is noted, that is, whether it fires, misfires or squibs, and result is recorded. Squibs shall be counted as misfires.

D.4.2.9 Ball is removed from ball trap.

D.4.2.10 Breech-block is unlocked and opened.

D.4.2.11 Cartridge case is removed from case holder.

D.4.2.12 The procedure prescribed in D.4.2.3 thru D.4.2.11 is then followed until the number specified has been tested at the lower height.

D.4.2.13 Following the procedure prescribed in D.4.2.2 the machine is set for the upper height.

D.4.2.14 The test sample for the upper height is then tested following the procedure prescribed in D.4.2.3 and D.4.2.11.

D.5 Conducting the test (Complete Run-down Test)

D.5.1 Preparation for test.

D.5.1.1 Preparation for test shall be as prescribed in D.3.1.

D.5.2 Conducting the test

D.5.2.1 Current is applied to the magnet coil of the drop test machine and the magnet height is set so that distance between bottom of suspended ball and the head of the firing pin, with primed case in position is eight (8) inches.

D.5.2.2 The procedure prescribed in D.4.2.3 through D.4.2.11 shall be repeated until the specified number of primed cases have been tested at eight (8) inches. The number of primers firing and the number misfiring shall be recorded.

D.5.2.3 The procedure prescribed in D.4.2.3 and D.4.2.11 is then repeated at nine (9) inches, ten (10) inches, etc., until a height is reached at which all the primers in the sample fire. The magnet is then lowered to a height of drop of seven (7) inches, then six (6) inches, etc., until a height is reached at which all the primers in the sample misfire. The number firing and the number misfiring at each height, shall be recorded.

D.5.2.4 The prescribed procedure constitutes a complete run-down test.

D.5.3 Calculation of Sensitivity Characteristics

The primer sensitivity characteristics to be calculated are " H_{bar} ", " σ " and " a_3 ". These three statistics can be defined in terms of the data obtained in the drop test as follows:

$$a. \quad H_{bar} = \sum p_i + (H_{100\%} + .5)$$

$$b. \quad s = \sqrt{(\sum p_i \times k_i) - (\sum p_i)^2} \quad .$$

$$c. \quad a_3 = \frac{\sum p_i s_i + 2(\sum p_i)^3 - 3 \sum p_i k_i \sum p_i}{s^3}$$

Where

H_{bar} Mean critical height, or the height at which 50 percent of the primers fire and 50 percent of the primers misfire.

Σ Sum of individual values

p_i Decimal fraction of primers misfiring at each individual height

$H_{100\%}$ First height at which all primers in sample misfire

σ Standard deviation of the critical heights

k_i Variance factor

s_i Skewness factor

a_3 Skewness value

D.5.3.1 The data obtained in the run down tests are tabulated in the manner illustrated on Figure 1.

- a. In Column I "Height of Drop", enter all the intermediate heights of drop, in consecutive order; starting with the lowest height at which some of the primers fire and some fail to fire. The height at which all the primers fire and the height at which all the primers misfire are not included.
- b. In Column II "Number Fired", enter the number of primers firing at each height.
- c. In Column III "Number Misfired", enter the number of primers which fail to fire at each height.
- d. In Column IV "Fraction Misfired", enter the decimal fraction of the primers that fail to fire at each intermediate height. This fraction is designated " p_i ", and is obtained by dividing the number of primers that fail to fire by the number of primers tested. Results are recorded to the closest second decimal place.
- e. Add numbers contained in Column IV and enter sum as $\sum p_i$. Directly under $\sum p_i$ enter $H_{100\%} + .5$ (the first height at which all the primer in the sample misfired, plus .50). Add $\sum p_i$, and $H_{100\%} + .5$. The result is H_{bar} (mean critical height).

- f. In Column V "Variance Factor", the odd numbers in sequence are written; i.e., 1, 3, 5, 7, 9 etc. Number 1 must be in alignment with the first entry in Column IV.
- g. Column VI, the value of the individual entries in Column IV, " p_i " are multiplied by the corresponding Individual entries in Column V, " k_i " and the results " $p_i k_i$ " are placed in proper alignment in Column VI. For example, if the number in Column IV is .74 and the odd number aligned with it in Column V is 5, then place 3.70 ($5 \times .74$) in Column VI on the same line as 5 and .74. Odd numbers remaining in Column V having no corresponding entries in Column IV are ignored.
- h. Add the numbers contained in Column VI and enter the sum as $\Sigma p_i k_i$. Directly under $\Sigma p_i k_i$ enter $(\Sigma p_i)^2$, the square of the sum of Column IV. Write $(\Sigma p_i)^2$ to the nearest second decimal place. Subtract $(\Sigma p_i)^2$ from $\Sigma p_i k_i$. The result is σ^2 . Extract the square root of σ^2 to obtain σ , the standard deviation.

Figure 1

Program _____ Lot NO _____ Priming Composition _____ Computer _____ Weight of Ball _____ # of primer tested @ each height _____ Caliber _____ Headspace _____ Firing Pin Protrusion _____ Diameter of Ball _____ Date of Mfg _____ Date Primed _____ Date Tested _____							
Column I	Column II	Column III	Column IV	Column V	Column VI	Column VII	Column VIII
Height of Drop (inches)	Number of Fired	Number of Misfires	Fraction Misfiring = p_i	Variance Factor k_i	Standard Deviation factor times Fraction Misfiring = $k_i p_i$	Skewness Factor s_i	$p_i s_i$
4 5 6 7 8 9 10 11			All misfire All fire	1 3 5 7 9 11 13 15 17 19 21 23 25		1 7 19 37 61 91 127 169 217 331 397 469 547	
	$\Sigma p_i =$ $H_{100\%} + 0.5 =$ $H_{bar} =$		$\Sigma k_i p_i =$ $(\Sigma p_i)^2 =$ $\Sigma k_i p_i - (\Sigma p_i)^2 = s^2$ $s^2 =$ $s =$	$H_{bar} - 2s =$ $H_{bar} + 5s =$			

D.5.3.2 H_{bar} plus and minus the multiple(s) of σ as prescribed in this specification, OEM SPEC 00016, Paragraph 4.3.1.1 shall be computed. The results obtained are then compared with the requirements of the same specification to determine acceptability.

D.5.3.3 When determination of skewness is required, the following procedure shall be accomplished.

- a. Follow procedures prescribed In D.5.3.1 a through D.5.3.1 h.
- b. In Column VII "Skewness Factor", the numbers entered areas shown on Figure 1.
- c. Column VIII, numbers as shown In Column VII are multiplied by corresponding numbers in Column IV. Results are placed on same line in Column VIII " $p_i s_i$ ". Ignore numbers in Column VII that have no corresponding entries in Column IV.
- d. Add numbers contained in Column VIII and enter sum as $\Sigma p_i s_i$.
- e. Cube the sum of Column IV (Σp_i) and multiply by 2.
- f. Multiply the sum of Column VI ($\Sigma p_i k_i$) by the sum of Column IV (Σp_i), then multiply the product by 3.
- g. Cube the standard deviation (σ) obtained in Column VI.
- h. Calculate skewness value (a_3) by substitution of computed following formula:

$$a_3 = \frac{\sum p_i s_i + 2\left(\sum p_i\right)^3 - 3\sum p_i k_i \sum p_i}{S^3}$$

D.6 RECORDING OF RESULTS

Results shall be recorded as prescribed in D.5.3.1.

D.6.1 The following data shall also be recorded:

- a. Headspace

- b. Firing-pin protrusion
- c. Diameter of ball
- d. Number tested at each height

APPENDIX E**E. Certificate of Compliance**

E.1 Scope. A Certificate of Compliance shall be submitted with each lot and type of Ammunition. The Certificate of Compliance shall certify that:

Each lot of cartridges meets or exceeds the “ Cartridge Acceptance Ballistics Tests” of OEMC SPEC 00016, Paragraph 3.4. See Paragraph E.2 below. Each piece of acceptance test equipment is identified and was in calibration during acceptance testing. See Paragraph E.3 below. Each component, of the cartridges, meet the requirements of OEMC SPEC 00016, Paragraph 3.2. See Paragraph E.4 below.

4. The completed cartridges meet the workmanship requirements of OEMC SPEC 00016, Paragraph 3.5. See Paragraph E.5 below.

E.2 Cartridge Acceptance Tests Ballistics**E.2.1 Rubber Ball Cartridge**

E.2.1.1 Velocity - In accordance with specification paragraph 3.4.1.1 and Appendix A. The maximum individual cartridge velocity shall not be greater than 450 Feet/Second at any test temperature. Average of required sample size cartridges fired at all test temperatures shall be 325 ± 35 Feet/Second.

Results: Average of 198 cartridges: _____ Feet/Second.

E.2.1.2 Accuracy – In accordance with specification paragraph 3.4.1.2 and Appendix B. At $70^{\circ} \pm 5^{\circ} \text{F}$, Requirement: For each of 198 cartridges at least 18 of the 22 rubber balls shall hit a 6 foot high by 9 foot wide target, at a range of 50 feet from the muzzle of the test weapon.

Results: _____ of 198 cartridges met the above requirement.

E.2.1.3 Function and Casualty – In accordance with specification paragraph 3.4.1.3 and Appendix C. At all temperatures, Requirement: Of the total sample size of 198 cartridges (approximately one fourth fired from each of 4 M203 grenade launchers) there shall be no weapon stoppages due to the cartridges.

Results: _____ of 198 cartridges met the above requirement.

E.2.2 Foam Rubber Baton Cartridge

E.2.2.1 Velocity – In accordance with specification paragraph 3.4.2.1 and Appendix A. The maximum individual cartridge velocity shall not be greater than 450 Feet/Second at any test temperature. Average of the sample size of cartridges fired at All temperatures shall be 325 ± 35 Feet/Second.

Results: Average of 198 cartridges: _____ Feet/Second.

E.2.2.2 Accuracy – In accordance with specification paragraph 3.4.2.2, Figure 1 and Appendix B, a total of 198 cartridges (approximately one fourth fired from each of four M203 grenade launchers). At $70^{\circ}\pm 5^{\circ}\text{F}$, Requirement: All sample size cartridges shall have all of the projectiles (all foam rubber batons) hit a 6 foot high by 6 foot wide target (areas 1 and 2 of Figure 1) at a distance of 50 feet from the muzzle of the test weapon. Out of 198 cartridges, a minimum of 158 of the cartridges shall have at least 2 foam rubber batons hit the center 3 foot wide by 6 foot high (area 1 of Figure 1) target. The foam rubber baton projectiles shall hit the target without hitting the ground to be a valid hit.

Results: _____ of 594 foam rubber batons hit the 6 foot by 6 foot target, and _____ of 198 cartridges had at least 2 foam rubber batons hit the center 3 foot wide by 6 foot high (area 1 of Figure 1) target.

E.2.2.3 Function and Casualty – In accordance with specification paragraph and Appendix C. At all temperatures, Requirement: Of the total sample size of 198 cartridges (approximately one fourth fired from each of four M203 grenade launchers) there shall be no weapon stoppages due to the cartridges.

Results: _____ of 198 cartridges met the above requirement.

E.3 Acceptance Test Equipment Certification

E.3.1 List each piece of test equipment as follows:

Name _____
Manufacturer _____
Model Number _____
Calibration Effective ____/____/____ **Through** ____/____/____
DATE **DATE**

E.4 Cartridge Component Certification-In accordance with OEMC SPEC 00016, Paragraph 3.2.

E.4.1 List each cartridge component certification as follows:

Component name _____
Manufacturer _____
Manufacturer's part number _____
Manufacturer's lot number _____

E.5 Statement: "The completed cartridges in this lot meet the workmanship Requirements of OEMC SPEC 00016, Paragraph 3.3 and 3.5."

E6. Certification Statement.

E.6.1 The following statement shall conclude each "Certificate of Compliance":

" This is to certify that the data of E.2, E.3 and E.4 above are accurate, that the following ammunition meets or exceeds all acceptance test requirements specified in Contract _____ with modifications, if any, and that all certification test equipment was in calibration at the time it was used in the performance of acceptance testing."

Ammunition Lot: _____

Lot Quantity: _____

CLIN: _____

Specification: OEMC SPEC 00016

NSN Number: _____

Signed: _____

Typed Name/ Position